THE ROLE OF LOVING-KINDNESS AND WISDOM PROCESSES ON FORGIVENESS MECHANISM IN THAI NURSES: APPLYING BUDDHIST PRINCIPLES

A DISSERTATION

BY

ITSARA BOONYARIT

Presented in Partial Fulfillment of the Requirements for the
Doctor of Philosophy Degree in Applied Behavioral Science Research
at Srinakharinwirot University

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AN ABSTRACT

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Itsara Boonyarit. (2012). *The Role of Loving-Kindness and Wisdom Processes on Forgiveness Mechanism in Thai Nurses: Applying Buddhist Principles.* Dissertation, Ph.D. (Applied Behavioral Science Research). Bangkok: Graduate School, Srinakharinwirot University, Advisor Committee: Assist. Prof. Dr. Wiladlak Chuawanlee, Prof. Dr. Ann Macaskill, Dr. Numchai Supparerkchaisakul.

The main objectives of this research were to 1) conceptualise the forgiveness construct within the work context of Thai nurses through both the qualitative and quantitative inquiries; 2) empirically examine the structural model identifying the role of loving-kindness and wisdom processes on a forgiveness mechanism applying from Buddhist perspective. The research was completed by conducting three studies, as follows.

The first study was aimed to conceptualise the forgiveness process based on experiences of Thai nurses in a hospital context. Thirty cases were interviewed and qualitative methods were used to identify participants' cognitions, emotions, and behaviours in relation to the offensive event. The findings identified four continuous stages of the forgiveness process: an experience stage, re-attribution stage, forgiveness stage, and behavioural stage. The study also addressed the meaning of forgiveness as defined by participants, thus providing a Thai understanding of forgiveness. Five dimensions of forgiveness were identified: overcoming negative approaches towards the offender, abandonment of negative judgment, fostering of positive approaches and loving-kindness towards the offender, awareness of the benefits of forgiveness, and forgiveness as incorporated within Buddhist beliefs. Social factors within the work environments and the influence of Buddhist beliefs were also discussed as factors facilitating forgiving behaviour.

For the second study, several findings from the first study were aimed to develop the Forgiveness Scale measuring forgiveness of a specific offense. Data from 348 nurses were subjected to an exploratory factor analysis (EFA) and the psychometric properties of the scale were examined. Results from EFA suggested retaining four underlying factors of the forgiveness construct: Overcoming Negative Thought and Feeling toward the Offender, Seeking to Understand the Offender’s Reasons, Fostering Positive Approaches towards the Offender, and Belief in the Benefits of Forgiveness. Reliability coefficients for the total scale and subscales were adequate. Evidence of construct validity is

presented. Scores on the Forgiveness Scale were positively associated with other related forgiveness constructs. Nomological validity analysis supported the theoretical networks of the forgiveness construct. Forgiveness played the fully mediating role in the relationship between dispositional forgiveness and willingness to reconcile, and played the partial mediating role in the relationship between rumination and seeking to revenge the offender. Bootstrap analysis on the parameter estimates of the sample results revealed satisfactory level of internal replicability and stability of the results across the samples.

The final study incorporated Buddhist perspectives from the hypothesised model of forgiveness to be tested, examining the role of loving-kindness and wisdom in the forgiveness process with regards a work-related interpersonal offense. Six constructs included in the model were measured by the parcel of the questionnaires consisting of the Forgiveness Scale, the Loving-Kindness Scale, the Right View Scale, the Meritorious Scale, the Thinking Wisely Scale, and the Perceived Good Friend Scale. This model included several hypotheses to be tested: loving-kindness and right view would have the positive direct effect on forgiveness; meritorious will would have a positive direct effect on loving-kindness; thinking wisely would have a positive direct effect on meritorious will; thinking wisely and perceived good friend would positively contribute to right view. Data from 333 nurses were subjected to a confirmatory factor analysis and structural equation modelling analysis, respectively, using the LISREL program. All the hypotheses were statistically significant at .01 levels. Within the structural model, for the loving-kindness path , loving-kindness had a positive direct effect on forgiveness; meritorious will had a positive direct effect on loving-kindness; thinking wisely had a positive direct effect on meritorious will; and both thinking wisely and meritorious will had a positive indirect effect on forgiveness. For the wisdom path: right view had a positive direct effect on forgiveness; thinking wisely and perceived good friend had a positive direct effect on right view; and both thinking wisely and perceived good friend also had an indirect effect on forgiveness. Moreover, in the adjusted model, an additional direct effect was found between meritorious will and right view. Finally, five Buddhist constructs related to the loving-kindness and wisdom processes could account for 91% of the variance of forgiveness. The implications for further research and forgiveness interventions are discussed.

บทบาทของเมตตาและกระบวนการทางปัญญาที่มีต่อการให้อภัยในพยาบาลไทย: การประยุกต์หลักธรรมทางพุทธศาสนา

บทคัดย่อ

ของ

อิสระ บุญญะฤทธิ์

เสนอต่อบัณฑิตวิทยาลัย มหาวิทยาลัยศรีนครินทรวิโรฒ เพื่อเป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรดุษฎีบัณฑิต สาขาการวิจัยพฤติกรรมศาสตร์ประยุกต์

กุมภาพันธ์ 2555

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งานวิจัยนี้มีวัตถุประสงค์หลักเพื่อ 1) ศึกษามโนทัศน์เกี่ยวกับการให้อภัยในบริบทการทำงานของพยาบาลไทยโดยใช้วิธีการศึกษาเชิงคุณภาพและเชิงปริมาณ และ 2) เพื่อพัฒนาและทดสอบแบบจำลองความสัมพันธ์ที่ประยุกต์ใช้หลักธรรมทางพุทธศาสนาโดยระบุบทบาทของกระบวนการของเมตตาและปัญญาที่มีต่อการให้อภัย การวิจัยครั้งนี้สามารถแบ่งออกได้เป็น 3 การศึกษาได้แก่

การศึกษาแรกมุ่งที่จะศึกษามโนทัศน์เกี่ยวกับกระบวนการให้อภัยโดยพื้นฐานของประสบการณ์ของพยาบาลไทยที่ทำงานในบริบทของโรงพยาบาล สามารถสัมภาษณ์ข้อมูลได้ทั้งสิ้น 30 กรณีศึกษา และใช้วิธีการวิเคราะห์ข้อมูลเชิงคุณภาพในการศึกษาความคิด อารมณ์ และพฤติกรรมของผู้ให้ข้อมูลที่มีต่อสถานการณ์การกระทบกระทั่งกันในการทำงาน ผลการวิเคราะห์พบว่ากระบวนการให้อภัยสามารถแบ่งออกได้เป็น 4 ขั้นที่ต่อเนื่องกันไปได้แก่ ขั้นการมีประสบการณ์ ขั้นของการปรับเปลี่ยนความคิด ขั้นของการให้อภัย และขั้นของพฤติกรรมที่เป็นผลภายหลังการให้อภัย การศึกษานี้ยังมุ่งให้ความสนใจกับการให้นิยามคำว่าการให้อภัยจากผู้ให้ข้อมูลเพื่อจะสามารถทำความเข้าใจความหมายของการให้อภัยในบริบทของไทยได้ ผลการวิเคราะห์พบว่าสามารถจัดหมวดหมู่ความหมายของการให้อภัยได้ 5 หมวดได้แก่ การพยายามเอาชนะท่าทีทางลบที่มีต่อผู้ที่มากระทำไม่ดี การละทิ้งหรือไม่ตัดสินในทางลบ การส่งเสริมท่าทีทางบวกและให้ความเมตตาต่อผู้ที่มากระทำไม่ดี การตระหนักถึงประโยชน์ของการให้อภัย และความเชื่อที่ว่าการให้อภัยเป็นสิ่งที่ดีตามหลักพุทธศาสนา นอกจากนี้ยังพบปัจจัยทางสังคมและสิ่งแวดล้อมการทำงาน และความเชื่อทางศาสนาพุทธที่มีอิทธิพลต่อการส่งเสริมให้เกิดการให้อภัยแก่ผู้ที่มากระทำไม่ดีต่อตนเอง

การศึกษาที่สองได้นำผลการศึกษาเกี่ยวกับการนิยามความหมายของการให้อภัย มาเป็นแนวคิดพื้นฐานเพื่อพัฒนาแบบวัดการให้อภัยในการกระทบกระทั่งของความสัมพันธ์ระหว่างบุคคลที่เฉพาะเจาะจง แบบวัดการให้อภัยที่ได้ถูกนำมาวิเคราะห์องค์ประกอบเชิงสำรวจและตรวจสอบคุณสมบัติทางจิตมิติของแบบวัด โดยการเก็บข้อมูลจากกลุ่มตัวอย่างพยาบาลทั้งสิ้น 348 คน ผลการศึกษาพบว่าการให้อภัยประกอบด้วย 4 องค์ประกอบคือ การเอาชนะความคิดและความรู้สึกทางลบที่มีต่อผู้มากระทำไม่ดี การพยายามทำเข้าใจเหตุผลของผู้ที่มากระทำไม่ดี การส่งเสริมท่าทีทางบวกที่มีต่อผู้ที่มากระทำไม่ดี และความเชื่อในผลดีที่ได้จากการให้อภัย ผลการวิเคราะห์ความเชื่อมั่นของแบบวัดทั้งฉบับและรายองค์ประกอบพบว่าอยู่ในระดับดี หลักฐานจากการวิเคราะห์ความเที่ยงตรงเชิงโครงสร้างพบว่า คะแนนของแบบวัดการให้อภัยที่พัฒนาขึ้นมีความสัมพันธ์ทางบวกกับแบบวัดมาตรฐานอื่นๆ ของการให้อภัย ผลการวิเคราะห์ความเที่ยงตรงเชิงความสัมพันธ์ของตัวแปรพบว่าการให้อภัยมีความสัมพันธ์เชิงแนวคิดกับตัวแปรอื่นๆ โดยพบว่าการให้อภัยในการกระทบกระทั่งของความสัมพันธ์ระหว่างบุคคลที่เฉพาะเจาะจงแสดงบทบาทโดยเป็นตัวแปรคั่นกลางโดยสมบูรณ์ระหว่างความสัมพันธ์ระหว่างการให้อภัยแบบลักษณะนิสัยกับความตั้งใจที่จะปรองดองผู้ที่มากระทำไม่ดีต่อตนเอง และพบว่ายังแสดงบทบาทโดยเป็นตัวแปรคั่นกลางโดย

บางส่วนระหว่างความสัมพันธ์ระหว่างความขุ่นเคืองใจกับความพยายามแก้แค้นคืน ผลจากการวิเคราะห์ความสามารถในการให้ผลซ้ำโดยวิธีการวิเคราะห์บู๊ทแสตรปค่าพารามิเตอร์จากกลุ่มตัวอย่างพบว่า ระดับของการให้ผลซ้ำภายในและความคงที่ของผลวิเคราะห์ที่ได้จากกลุ่มตัวอย่างอยู่ในระดับที่น่าพึงพอใจ

การศึกษาสุดท้ายมีวัตถุประสงค์เพื่อพัฒนาและทดสอบแบบจำลองบทบาทของตัวแปรที่เกี่ยวข้องกับกระบวนการของเมตตาและปัญญาที่มีความสัมพันธ์กับการให้อภัย โดยพัฒนาแบบจำลองสมมุติฐานจากการประยุกต์ใช้หลักธรรมทางพุทธศาสนาซึ่งประกอบด้วยสมมุติฐานคือ ความเมตตาและสัมมาทิฏฐิมีอิทธิพลทางบวกต่อการให้อภัย กุศลธรรมฉันทะมีอิทธิพลทางบวกต่อความเมตตา โยนิโสมนสิการมีอิทธิพลทางบวกต่อกุศลธรรมฉันทะ โยนิโสมนสิการและการรับรู้กัลยานมิตรมีอิทธิพลทางบวกต่อสัมมาทิฏฐิ ผู้วิจัยเก็บข้อมูลจากกลุ่มตัวอย่างโดยใช้แบบวัดทั้งสิ้น 6 แบบวัดได้แก่ แบบวัดการให้อภัย แบบวัดความเมตตา แบบวัดสัมมาทิฏฐิ แบบวัดกุศลธรรมฉันทะ แบบวัดโยนิโสมนสิการ และแบบวัดการรับรู้กัลยานมิตร ข้อมูลที่ได้จากกลุ่มตัวอย่างทั้งสิ้น 333 คนถูกนำมาวิเคราะห์องค์ประกอบเชิงยืนยันและหลังจากนั้นเข้าสู่การวิเคราะห์แบบจำลองโครงสร้างความสัมพันธ์ของตัวแปรโดยใช้โปรแกรมลิสเรล ผลจากการทดสอบแบบจำลองโครงสร้างความสัมพันธ์ตัวแปรสมมุติฐานพบว่าสมมุติฐานทั้งหมดมีนัยสำคัญทางสถิติที่ระดับ .01 โดยเส้นทางของกระบวนการของเมตตาที่มีต่อการให้อภัยพบว่าความเมตตามีอิทธิพลทางบวกต่อการให้อภัย กุศลธรรมฉันทะมีอิทธิพลทางบวกต่อความเมตตา และโยนิโสมนสิการมีอิทธิพลทางบวกต่อกุศลธรรมฉันทะ นอกจากนี้ยังพบอิทธิพลทางอ้อมของโยนิโสมนสิการกับกุศลธรรมฉันทะที่มีต่อการให้อภัยด้วย ส่วนเส้นทางของกระบวนการทางปัญญาที่มีต่อการให้อภัยพบว่า สัมมาทิฏฐิมีอิทธิพลทางบวกต่อการให้อภัย โยนิโสมนสิการและการรับรู้กัลยานมิตรมีอิทธิพลทางบวกต่อสัมมาทิฏฐิ และส่งอิทธิพลทางอ้อมต่อไปยังการให้อภัย นอกจากนี้ยังพบว่าหลังจากมีการปรับแบบจำลองให้สอดคล้องกับข้อมูลเชิงประจักษ์ยังพบความสัมพันธ์เพิ่มเติมโดยกุศลธรรมฉันทะมีอิทธิพลทางบวกต่อสัมมาทิฏฐิ แบบจำลองความสัมพันธ์ของตัวแปรที่ระบุเส้นทางของกระบวนการความเมตตาและปัญญาสามารถทำนายความแปรปรวนของการให้อภัยได้ร้อยละ 91 ทั้งนี้ผู้วิจัยยังได้อภิปรายแนวทางการประยุกต์ใช้สำหรับการวิจัยในครั้งต่อไปและแนวทางสำหรับการออกแบบเครื่องมือพัฒนาการให้อภัยในบริบทของการทำงานต่อไป

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Itsara Boonyarit

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CHAPTER 1

INTRODUCTION

Background

Humans are social beings who depend upon each other for their survival. It means that they need to interact and create relationships with others in their social world such as family, school, community, or even nation. In addition in work contexts, co-worker relationships are increasingly recognized as one of the most ubiquitous and important interpersonal relationships (Struthers, Dupuis, & Eaton, 2005); However, relating to others inevitably exposes people to the risk of being offended or harmed by those other people (McCullough, 2001). Relating to others inevitably exposes individuals to the likelihood of being transgressed against by those other colleagues, and it can easily escalate into more serious conflicts among them (Aquino, Grover, Goldman, & Folger, 2003; Struthers, Dupuis, & Eaton, 2005). Conflict in the workplace may range from peers who have minor disagreements to departments or work units that are in serious conflict with each other. Regardless of the scale, workplace conflict may be an inevitable workplace problem (Butler & Mullis, 2001).

In the medical care work context, nursing is a profession focused on assisting individuals, families, and communities to attain, regain, and maintain optimal health and functioning (APEC Secretariat, 2007). In this vein, nurses must collaboratively operate within their own profession and with other medical staff through in teamwork in order to care for their patients. In Thailand, each district has a large group of nurses who care for patients in every part of the country. Their operations may involuntarily or voluntarily be harmed by their co-workers due to the high stress levels involved in the work itself, professional conflict, or high conflict work environments. Yuthvoravit (2007) found that most conflict involving head nurses occurred amongst the team members of nurses themselves. The causes of these conflicts which may offend others were poor communication, conflicts of interest, and differences in competencies.

In general, there are two ways that nurses may use to restore the balance of justice when they are harmed in conflict situations. Firstly, the individual experiencing the interpersonal conflict may attempt to restore justice through expressions of destructive

patterns such as anger or even acts of revenge (Butler & Mullis, 2001). These negative reactions may affect the quality of relationships amongst co-workers. As a result, it may impact badly on patient services. Conversely, if individuals use more constructive and cooperative ways to resolve their conflicts, it may positively affect teamwork and collaboration and serve the patients better (Wannapaktr, 1994; Jaroenbootra, 2004).

Forgiveness is one positive strategy that may moderate workplace conflict and stimulate cooperation (Butler & Mullis, 2001). Using forgiveness as a problem-solving strategy can reduce feelings of anger, resentment, and negative judgment regarding the offender (McCullough & Wirthington, 1994). Forgiveness should be an important concern of organisational theorists and practicing managers in the workplace in healthcare because it is a way for individuals to repair damaged relationships and overcome debilitating thoughts and emotions resulting from interpersonal injury (Aquino et al., 2003). At the organisational level, forgiveness is the most challenging and essential element of attaining a more nurturing and fulfilling climate at work (Stone, 2002). Moreover, at the individual level, forgiveness is associated with better health and personal well-being (McCullough & Witvliet, 2002).

From the 1980s until now, the number of empirical papers and book-length treatments of forgiveness has increased substantially. The appearance of this theoretical and empirical research seemed to suggest that forgiveness was a concept whose popularity was on the rise (McCullough, Pargament, & Thoresen, 2000). However, within the management literature, organisation sciences have produced very little theory and empirical research on forgiveness in work contexts (Aquino et al., 2003; Madsen, Gygi, Hammand & Plowman, 2002). Madsen et al. (2008) suggested that understanding forgiveness in the workplace is a complex undertaking, and questions still remain for researchers in organisational behaviour to address the conceptualisation of relevant forgiveness related constructs.

Beside the issues among theorists trying to conceptualise forgiveness in work contexts, the ability to forgive is conceptualized within positive psychology as an important virtue found in all cultures. From this perspective, researchers and clinicians are encouraged to explore the roles of cultural and contextual factors, such as religious value and indigenous culture, in the diverse expression of this virtue (Sandage, Hill, &

Vang, 2003). McCullough et al. (2000) note that the field of scientific study of forgiveness still lacks a thorough understanding of the influences of religion, culture, and life situation on people's understandings and experiences of forgiveness. Without addressing these issues, scientific notions of forgiveness are likely to be disconnected from human experience. Until recently, several researchers had attempted to explore the definitions of forgiveness in both religious clergy and laypersons (Sandage, Hill, & Vang, 2003; Younger, Piferi, Jobe, & Lawler, 2004; Macaskill, 2005). These findings showed that connotations of forgiveness emerged in layperson may affected by their religious and indigenous beliefs. In this vein, exploring the experiences of forgiveness related to the cultural-situational basis of individuals will benefit the in-depth understanding of the construct. This cultural understanding will allow for the development of measures of forgiveness that incorporate culturally specific factors and even contextual factors rather than the more generic measures found in the existing international literature.

In Thailand, most of the people are Buddhist and their daily lives are also influenced by Buddhist beliefs and values. Individuals are persuaded to conduct their behaviour according to Buddhist principles, which present positive proper ethics aimed at pursuing personal well-being rather than power or riches. Individuals have equal opportunities to maximize their self-development to achieve their well-being; and the ethics are acted on to facilitate the behaviours towards those ends (Phra Brahmagunabhorn (P.A. Payutto), 2004). Forgiveness is seen as one of the Buddhist ethics, which benefits both the giver and receiver achieving for both a better social harmony. Buddhists are encouraged to practise the merit for themselves by granting forgiveness towards others. Conducting this ethic can be advantageous to individuals themselves, others, and society (H.H. Somdet Phra Nyanasamvara, 2008). Phra Brahmagunabhorn (P.A. Payutto) (2008a), a scholar monk in Theravada Buddhism, clarified that forgiveness is a cutting of revenge towards others. He identified the pre-conditions of forgiveness by explaining the two acts of humans towards others and the truth of nature: loving-kindness and wisdom. These two antecedents would harmonise together to facilitate forgiving behaviour towards the offender. That is to say, the victims have good will towards the offenders by expressing loving-kindness and the victims cognitively reflecting on themselves by using wisdom, the process of proper thinking towards the offensive circumstances, in order to solve the problem more constructively.

In addition to clarify the role of loving-kindness towards the offenders, Buddhist loving-kindness is defined as goodwill and amity, a wish to help all individuals attaining the benefits and happiness (Phra Brahmagunabhorn (P.A. Payutto), 2004). This construct is one of the social benefactors which encourage people to live without persecutions, to show goodwill toward their colleagues, and to associate interpersonally by acting with friendly thought, speech, and act. H.H. Somdet Phra Nyanasamvara (2008) explained that when individuals are harmed by others, they generally feel angry and attempt to seek revenge; however, if the victims practise granting the loving-kindness, they are likely to abandon vengeance and it then contributes to forgiving more easily.

Though there is no empirical scientific evidence showing an association between loving-kindness and forgiveness, several studies showed a positive correlation between loving-kindness and positive psychological constructs similar to forgiveness. Hutcherson, Seppala, and Gross (2008) found that just a few minutes of loving-kindness meditation increased the feelings of social connection and positivity towards novel individuals on both extrinsic and implicit levels. This mental exercise may help to increase positive emotions and decrease social isolation. Moreover, Otake, Shimai, and Tanaka-Matsumi (2006) demonstrated that happy people scored higher on their motivation to perform kind behaviours. Subjective happiness was increased simply by counting a person's own acts of loving-kindness during a period of one week. Happy people became more kind and grateful through the counting kindness intervention. Furthermore, Hietbrink (2009) found that participants engaged in loving-kindness to cope with their stressor reported better outcomes from the stressful event.

For the Buddhist process of wisdom, Buddhists are taught to be aware that the granting of loving-kindness is not the only way to deal with problems regarding interpersonal conflict. If reconciliation occurs with the evil persons or those who have a hidden agenda, the act of loving-kindness is not enough to solve the offensive conflict, and it would result in the wrong view of and understanding towards the offensive event. Phra Brahmagunabhorn (P.A. Payutto) (2008a) noted that using wisdom, the process of thinking, towards the nature of an offense is the better way to solve the problem because it would achieve the right view or proper view taking a perspective on the offensive situation. That is to say, if the victims attempt to reflect themselves thoughtfully that holding a grudge and revenge towards the offenders is an unwholesome or evil act which

can later lead them to destructive outcomes, they would realise that seeking revenge is not the way they should follow to deal with their problems. Buddhist principles are presented to individuals to encourage them to think and to take a positive perspective on the offenders, conceptualising them as ordinary human beings who have both good and evil behaviours associated with them. When individuals think wisely that the wrongdoers are ordinary persons who can harm or be harmed by us, they are likely to decrease their negative reaction towards the offenders. The result is that the right view is achieved showing an understanding of the true nature of human-moral civilised persons. Finally, when the victims possess the right view, the right thoughts consisting of non-hatred and non-violence towards the offenders are also achieved. (Phra Brahmagunabhorn (P.A. Payutto), 2009).

At the present time, there is still no empirical study clarifying the role of the wisdom process on forgiveness within Buddhist research literature. However, if the researcher inferred the right view in terms of understanding and believing in the law of Karma which induces Buddhists see the world as fundamentally just, and this justice is maintained by Karma. Individuals who strongly hold their belief in Karma would restore justice by letting the offenders receive their own negative results in due course (Rye et. al., 2000). In the western concept, research has suggested that forgiveness is associated with dispositional belief and fairness (Strelan, 2007). One is the concept of personal belief in a just world (Dalbert, 2002), which demonstrated that the more individuals were induced that they get what they deserve, the less they experience intense feeling of anger. Lucas, Young, Zhdanova, and Alexander (2010) found that self-justice was indirectly positively related with forgiveness. Therefore, it could be inferred that there is a positive association between one's belief in justice and forgiveness. Furthermore, if the researchers inferred the right view as individual's belief in the Buddhist morals or ethics, therefore the persons who possess this character of right view would understand properly what is good or bad behaviour and how they should behave according to morals and ethics derived from Buddhist principles. Several empirical literatures on religious belief revealed positive associations between a strong belief in religion and forgiveness. (Rye et. al., 2001; Edwards et al., 2002; Konstan, Holmes, & Levine, 2003; Webb, Chickering, Heisler, & Call, 2005; Brown&Phillips, 2005; Hui, Watkins, Wong, & Sun, 2006). From

this evidence, it could be inferred that there is a positive association between one's belief in morality and forgiveness.

For this reasons, the present study aims specifically to conceptualise forgiveness constructs in Thailand, which is the first step in understanding forgiveness in the work context of Thai nurses. Moreover, it is intended to examine the structural model identifying the role of loving-kindness and wisdom processes on a forgiveness mechanism applying from Buddhist perspective. Because of the current study was focused with the work-related offense which is an ordinary circumstance of social living, the Buddhist principles applied in this research were scoped within a mundane level (Lokiya). The findings from this research are expected to contribute significant knowledge about forgiveness in both Thai culture and work related context; moreover, the scientific evidence of Buddhist view on a forgiveness mechanism is initiated and demonstrated, which will be beneficial to further study and development implications regarding to forgiveness.

Objectives of the Research

Investigating the forgiveness mechanism regarding to the work-related relationship from Thai layperson perspective is integral to the obvious explanation on cultural embedded forgiveness literatures. It is the intention of the current research to provide some insight to understand how Thais conceptualise the concept of forgiveness with respect to the work-related conflict; and how the forgiveness mechanism is empirically explained by Buddhist principles. The main objectives of this research are:

1. To conceptualise the forgiveness construct within the work context of Thai nurses through both the qualitative and quantitative inquiries. The qualitative method was used to understand and identify the concepts of forgiveness from the experiences of Thai nurses. Consequently, several qualitative findings were applied to produce the initial items of the forgiveness scale and it was quantitatively examined to determine the underlying factor structure, replicability, and construct validity.

2. To empirically examine the structural model identifying the role of loving-kindness and wisdom processes on a forgiveness mechanism applying from Buddhist perspective.

Significance of the Research

The major findings from this research are expected to contribute the significant insight knowledge on the subject of forgiveness within both Thai and work-related contexts, as follows.

1. For a theoretical perspective, the findings provide an apparent understanding of the forgiveness construct within a more cultural-specific context. For instance, the conceptualisation of forgiveness, as perceived by Thai layperson, contributes an empirical basic knowledge which is essential for those who are interested to conduct a further study on forgiveness in Thai context. Moreover, addressing on forgiveness regarding to the work-related interpersonal conflict expands the scope of empirical study into a work-social setting which still be lacking in the behavioural and social science publications. Furthermore, the process of forgiveness emerged from the study provides the evidence which calling for further investigation on relationship model of the antecedents and forgiving behaviour. Finally, by incorporating Buddhist principles into the forgiveness mechanism, this work sheds light on the scientific study of Buddhist which has been acknowledged several thousand years ago; and calls for the questing of Buddhist psychology incorporating into the empirical and secular literatures.

2. For the practical implication, the findings from the forgiveness conceptualization and the structural model, which explained the antecedents of forgiveness, are of advantage to Thai researchers and human resource practitioners to design the more cultural-specific forgiveness interventions. These are effective to the helping of clients within the workplace, for instance worker counseling, psycho-educational training, team based development, etc.

Scope of the Research

The current research was obviously focused on the forgiveness mechanism within Thai nursing work-context by incorporating Buddhist principles to understand and to explain whether the positive behavioural constructs derived from the selected Buddhist literatures could explain the process of individual’s forgiving behaviour. This cultural understanding allowed the researcher and further academicians to conduct an empirical research and to develop the clinical and human resource interventions dealing with

interpersonal conflict within the medical work context. Nurses were addressed to this study due to the salient nature of work which requires a high cooperation and forgiveness is deserved to be a constructive strategy used to maintain their teamwork.

The current research was completed, consisting of four main tasks: reviewing the literatures regards Buddhist principles explaining forgiveness and also the reviewing of western concept and measurement method; conceptualisation of forgiveness through the qualitative inquiry (study1); quantitative exploring the underlying factor structure of forgiveness and its psychometric properties (study2); and examination of the forgiveness mechanism incorporated by Buddhist principles from the literature review (study3). The overview of tasks on the current research is presented in figure 1.1

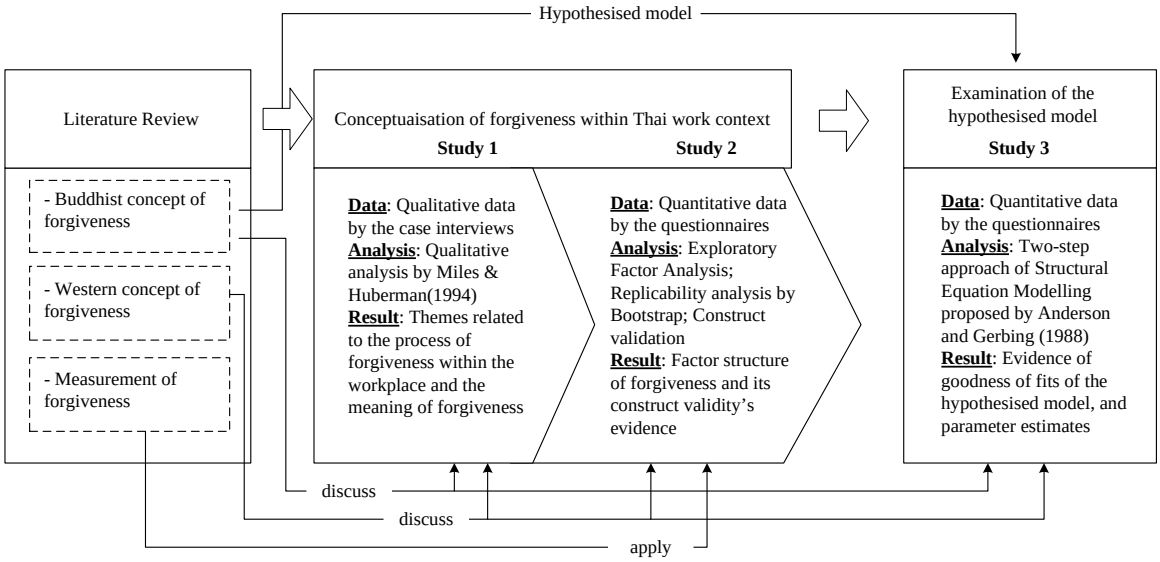

Figure 1.1. Overview of the current research.

The researcher first reviewed the literatures related to forgiveness construct. The main purpose of the current research was attempting to explain forgiveness mechanism by applying Buddhist principles. Therefore most of the review portion rested on the Buddhist literatures regards individual's forgiveness. The loving-kindness and wisdom processes were proposed as the major paths towards forgiveness in Buddhist perspective. The researcher studied both the concepts of loving-kindness and wisdom and their antecedents. The hypothesised model which identifying the loving-kindness path and wisdom path on forgiveness within the work-related injured relationship was proposed and would be examined by study3. However, this research was based on the Buddhist

perspective on forgiveness. The researcher also reviewed the concept of forgiveness within the western literatures and the method to measure its construct. The definitions of forgiveness would be discussed in study1 and the measurement concept would be used to develop the forgiveness measure in study2.

Forgiveness is the positive construct which embedded with both culture and life situation. The research which begins with only the theoretical or conceptual concepts may disconnect this construct with human experience. Understanding layperson's view on forgiveness provides the in-depth understanding of this construct which allows the researcher to develop more culturally specific forgiveness measure. Therefore, before examining the hypothesised model regards forgiveness, the conceptualization of forgiveness itself within Thai work-context was required. This was completed by two studies: conceptualisation of forgiveness through the qualitative inquiry (study1); quantitative exploring the underlying factor structure of forgiveness and its psychometric properties (study2).

The first study used qualitative analysis (Miles & Huberman, 1994) to identify the concept of forgiveness from the nurse's experiences among their health-care teams as well as to understand their view about forgiveness as Thai laypersons. The results presents the themes related to the process of forgiveness in a work context, definition of forgiveness, and Buddhist beliefs and values influencing the concept of forgiveness amongst Thais. The concept of forgiveness process and its definitions were also discussed with both Buddhist and western literatures.

For the second study, the qualitative result on the definitions of forgiveness was applied to this study as a conceptual background to produce the initial items of the forgiveness scale; subsequently, it was quantitatively examined to determine the underlying factor structure by using exploratory factor analysis (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Costello & Osborne, 2005). The internal replicability was investigated to indicate the invariance of the factors across the samples (Zientek & Thompson, 2007; Timmerman, Kiers, & Smilde, 2007). Moreover, the construct validation was employed to determine the convergent and nomological validity of the forgiveness construct using other related constructs. (Cronbach & Meehl, 1955; Hair, Black, Babin, Anderson, & Tatham, 2006). As a result, the forgiveness scale constructed

from this study would be beneficial allowing further study of forgiveness in workplace relationships.

After the conceptualisation of forgiveness, study2 and study3, was achieved. The third study was conducted. This study incorporated the religious perspective which Buddhist principles were applied to clarify the role of loving-kindness and wisdom processes on the forgiveness mechanism from the literature review. The researcher addressed the role of these religious factors on forgiveness regarding to the work-related offense. Six constructs, for instance Loving-Kindness, Right View, Meritorious Will, Thinking wisely, Perceived Good Friend, and Forgiveness, were included in the hypothesised model representing a path of loving-kindness and a path of wisdom which positively related to individual's forgiving behaviour towards the offender. Findings from the goodness of fit indices indicated that the model is acceptable showing its consistency with the empirical data collected from the participants. The proposed hypotheses were tested and significant parameter estimates were provided, showing the structural relationships among the constructs within the forgiveness mechanism. This followed by the implications for development intervention and implications for future research.

The researcher notes that there are three limitations on this research. The first concern is that there are two major branches of Buddhism broadly recognised in the world: Theravada, which is conducted predominantly in Thailand and South East Asia; Mahayana, which is conducted generally in East Asia. In this study, the researcher intended to incorporate Buddhist principles from Theravada perspective because of most of Thais are influenced by the teaching from this branch. Literatures in the present study are reviewed from books which had been written by scholars from Theravada. Secondly, notwithstanding that there are various principles in Buddhist literatures, the researcher only selects several principles which have been proposed and concerned the explanations of forgiveness mechanism so that the title of this dissertation would rather be called as applying Buddhist principles. Finally, the limitation on this research rests on the measurement regards Buddhist constructs. The measures, such as forgiveness and loving-kindness, are seemed closely in their sense and are used interchangeable in the literature. However, the researcher attempted to review, to clarify, and to differentiate the definitions and concepts based on Buddhist literatures (ie., Brah Brahmagunabhorn (P.A.

Payutto), 2009; Tiansongjai, 2007). The operational definitions were archived and were represented in instrument section in Chapter 6.

Definitions of the Constructs

1. Forgiveness (การให้อภัย) is the individual's cognitive, affective, and behavioural responses towards the offender. With forgiveness, the individual attempts to overcome the negative approaches towards the offender, abandons negative judgment, fosters more positive approaches towards the offender, and increases awareness of the benefits of forgiveness.

2. Loving-kindness (ความเมตตา) is a state where a person behaves according to friendship, goodwill, understanding, and the wish to help others attain benefit and well being. The Loving-Kindness Scale was operationalised through the concept of the principle of harmony (Phra Brahmagunabhorn (P.A. Payutto), 2004, p. 23-24), which defines loving-kindness including three dimensions of the social benefactors: friendly thought, friendly speech, and friend act. In this study loving-kindness is seen as the positive response to the specific-offense and towards the specific offender related to the injured relationship.

3. Right view (สัมมาทิฏฐิ) is the right understanding or belief of an individual about their world. They realise how to live according to morality or ethics, and are aware of the causes and effect of wholesome and unwholesome behaviour. The Right View is operationalised by the concept of mundane right view (Phra Brahmagunabhorn (P.A. Payutto), 2009, p.737-740), which refers that right view would be measured by the investigation of two components: 1) Understanding the behaviour regarding cause and effect or Karma; 2) Understanding the behaviour regarding what are considered as beneficial views which encourage goodness and happiness for their own life and society (morality and ethics).

4. Meritorious will (กุศลธรรมฉันทะ) refers to the mental state in which individuals desire or wish to live and exist with well-being and behaves like a positive motivation to do wholesome things. Meritorious will is operationalised by the concept of meritorious will by Phra Brahmagunabhorn (P.A. Payutto, 2009, 510), which defined meritorious will

as an aspiration to a good quality of life such as loving cleanliness, wishing to be peaceful, loving nature, desiring to live within a good environment.

5. Thinking wisely (โยนิโสมนสิการ) is the proper methods or strategies which individuals thoughtfully use to examine, reflect, trace, and analyse the problem they face in order to see it true nature, solve the problem, and bring about a benefit. Individuals who are skilled in this kind of thinking will understand the perspective which will enable them to gain benefits in their life. This construct is operationalised by the concept of meritorious stimulation method of thinking wisely (Phra Brahmagunabhorn (P.A. Payutto, 2009, p. 737), which intends to cut off and to diminish the craving motivation of individuals. This method encourages meritorious growth and the mundane right view among individuals who are practicing it. The process of this method is that individuals focus their cognitive state on what is the wholesome or unwholesome thing, then lead their motive to the wholesome perspectives and act in good ways.

6. Perceived good friend (การรับรู้กัลยานมิตร) refers individuals' perception that they have a good friend who makes suggestions, gives advice, or give information in order to encourage social conditions which are wholesome and helpful for individuals. Perceived good friend is operationalised using the concept of the true friends (Phra Brahmagunabhorn (P.A. Payutto), 2004, p. 2-3), which mentioned the qualities of a good friend should be of four kinds: the benefactor friend, comrade friend, advisory friend, and cherished friend.

7. The loving-kindness process (กระบวนการทางเมตตา) refers to a path representing the loving-kindness construct and its antecedents. This path was hypothesised by applying Buddhist principles related to loving-kindness (Phra Brahmagunabhorn (P.A. Payutto), 2008a; 2008c; 2009). It is represented that thinking wisely has a direct effect on meritorious will, then meritorious will has a direct effect on loving-kindness, and finally loving-kindness positively contributes to forgiveness towards the offender.

8. The wisdom process (กระบวนการทางปัญญา) refers to a path representing wisdom construct which is seen as process of attaining a moral act. This path was hypothesised by applying Buddhist principles related to wisdom (Phra Thepwethi (P.A. Payutto), 1995; Chanchamnong, 2003; Phra Brahmagunabhorn (P.A. Payutto), 2009). In this path, the

focus was on the right view which served as the important construct in wisdom process in the principle of the Noble Truths and the Middle Path. The right view affects to individual's forgiveness and it was achieved by two antecedents, thinking wisely and perceived good friend.

Organisation of the Dissertation

This dissertation is organised into seven chapters. The summary of each chapter is as follows:

Chapter 1: The present chapter provides background and significances of this study. The main objectives, research scope, and definitions of the variables of the study are also provided.

Chapter 2: This chapter is the literature review regarding to the construct of forgiveness. The chapter was begun with the basic concept of forgiveness in the Western literatures. This is followed by Buddhist perspectives on forgiveness, which loving-kindness and wisdom processes are recognised as the major roles facilitating forgiving behaviour toward the offender. The concepts of forgiveness, loving-kindness, and wisdom processes, in Buddhist literatures are provided. Antecedent variables of both loving-kindness and wisdom process are also included into the research framework presenting of the hypotheses to be tested within the hypothesised model.

Chapter 3: This chapter provides a summary of the methods conducted on this research. The qualitative data collection and analyses are presented for the first study. This chapter also presents the methods used in the second study including the sampling method, the process of exploratory factor analysis, the process of examining replicability through Bootstrap method, the scales and the analyses conducted for the construct validation. The last part of this chapter provides the methods used in the third study including sampling method, scales and their process of construction, and the method of structural equation modeling.

Chapter 4: This chapter presents the first study which qualitative analysis was conducted to conceptualise the construct of forgiveness from the nurse's experiences among their health-care teams. The results presents the themes related to the process of

forgiveness in a work context, definition of forgiveness, and Buddhist beliefs and values influencing the concept of forgiveness amongst Thais.

Chapter 5: This chapter presents the second study which aimed to produce a psychometric sounded measure of forgiveness. The initial items of the forgiveness scale were achieved and it was quantitatively examined to determine the underlying factor structure by using exploratory factor analysis. The internal replicability was investigated to indicate the invariance of the factors across the samples. The construct validation was employed to determine the convergent and nomological validity of the forgiveness construct using other related constructs.

Chapter 6: This chapter presents the third study which incorporated Buddhist principles to clarify the role of loving-kindness and wisdom processes on the forgiveness mechanism. The measurement models of the constructs included in the hypothesised model were examined identifying the goodness of fit indices. The proposed hypotheses were tested and significant parameter estimates were provided, showing the structural relationships among the constructs within the forgiveness mechanism.

Chapter 7: This chapter provides the summary of the results in this research. This is followed by the implications for development intervention and implications for future research.

CHAPTER 2

LITERATURE REVIEW

One of the major objectives of the current study is to examine the mechanism model of forgiveness applying Buddhist perspective within Thai literatures. By conducting scientifically through behavioural science research methodology, explaining Buddhist concept of forgiveness could benefit both Thai researchers and practitioners to design better more specific cultural interventions for dealing with interpersonal damaged relationships.

This portion is the literature review regarding to the concepts of forgiveness including Western perspective on forgiveness, measures of forgiveness, and Buddhist perspectives on forgiveness, which loving-kindness and wisdom processes are recognised as the major roles facilitating forgiving behaviour toward the offender. The concepts of forgiveness, loving-kindness and wisdom processes, in Buddhist literatures are provided. Antecedent variables of both loving-kindness and wisdom processes are also included into the research framework. These are as follows:

Western Concept of Forgiveness

In western literatures, forgiveness is seen as both an art and a science. As an art, it explains how people deal with the offensive situation personally and socially. The transgression is exposed and damages the personal relationship between people. In addition, forgiveness is a science which has been studied since the 1980s. As Worthington (2005, p. 1-2) mentioned, in behavioural science, clinical scientists construct their interventions to encourage forgiveness. Developmental psychologists began to study how children's reasoning about forgiveness developed. Personality psychologists attempted to examine who granted or did not grant forgiveness. Social psychologists identified how forgiveness presented or did not in daily social interactions. Health psychologists aimed to research the influence of forgiveness on physical health.

Enright and Coyle (1998) suggested that forgiveness is different from the other concepts, for instance, pardoning (which is related to a legal concept); condoning (which is the justification of the offense); excusing (which refers to an offense that was

committed because of extenuating circumstances); forgetting (which refers to the memory of a conscious awareness); and denial (which refers to a disinclination or inability to perceive the harmful damage that one has incurred).

There are three perspectives from which the construct of forgiveness and its related variables have been investigated (McCullough & Witvliet, 2002). Firstly, forgiveness is seen as the offense-specific construct. For this view, forgiveness is an interpersonal conflict related construct which takes place in each person's experience. Forgiving behaviour varies across the offensive situations.

Secondly, forgiveness is seen as the personality disposition, forgiveness is understood as a likelihood to forgive others across a variety of interpersonal conflict situations. In this view, the victim can be scaled along a forgiving-unforgiving continuum, with the majority of people placing somewhere toward an average of the population.

Finally, forgiveness is seen as the quality of social units. Forgiveness is viewed as the characteristic that is similar to intimacy, trust, or commitment. Some social units, such as families or communities, are attributed a high degree of forgiveness, whereas other social structures are attributed less forgiveness.

Meanings of forgiveness in Western literatures. There are several definitions of forgiveness among the major contributors in the published literature. Enright and Coyle (1998, p. 140) have defined forgiveness as a willingness to relinquish one's right to resentment and revenge, on the other hand, and to offer a more loving-kindness to the offender.

Worthington (1998, p. 108) proposed that forgiveness is a motivation to reduce avoidance from as well as to abandon the anger, grudge, and revenge towards the offender, conversely, to increase more conciliation when the moral norms can be re-established.

Hargrave and Sells (1997, p. 42) , from their work on family therapy, defined forgiveness as 1) allowing the victim to rebuild trust in relationship through behaving in a truthful manner, and 2) encouraging an open discussion of the relational mistreatment, so

that the victim and the offender can concur to pursue themselves for a better improved relationship.

McCullough and colleagues (1997) defined the essence of forgiveness as prosocial changes in one's motivation toward the offender.

McCullough, Pargament, and Thoresen (2000, p. 8-9) asserted that all existing definitions share one core attribute, that is when the victim granted forgiveness, their reactions toward (what they think of, feel about, want to do to, or actually do to) the offenders who had harmed or injured them become more positive and less negative. At last, they concluded that forgiveness is an intraindividual, prosocial change toward the offender that occurred within the specific interpersonal relationship.

In addition, there are two definitions of forgiveness presented in the work context literatures. Aquino et al. (2003) explained that interpersonal workplace forgiveness is a process where the individual, who was hurt by his or her colleague, attempts to overcome negative feelings, such as resentment and anger, toward the offender and to stop himself or herself from causing the offender harm even if he or she believes it is ethically justifiable to do so.

Cameron and Caza (2002) defined forgiveness more broadly at an organisational level. They presumed that organisational forgiveness is the capacity to encourage collective abandonment of justified resentment, hurt, and blame. Moreover, it is the fostering of constructive, forward-looking ways in response to the broken relationships. This process requires a transformation, and as a result the organization becomes more virtuous.

To sum up, in western literature, scholars attempt to clarify forgiveness as a psychosocial construct. McCullough et al. (2000) stated that when someone forgives a person who has committed an offense against him or her, it is the thought, feeling, motivation, or action of the victim, which changes. In this sense, forgiveness is described as a psychological construct. Nevertheless, forgiveness has a twofold character. It means that it has an interpersonal as well as an intrapersonal dimension. Forgiveness comes about in response to an interpersonal offense, and the forgiver essentially forgives in relation to someone else. Thus, even as being a psychological circumstance, forgiveness

is interpersonal in the same sense that many other psychological variables are interpersonal in nature.

Concept of Forgiveness in Buddhist Principles

Every major religion in the world, such as Buddhism, Christianity, Hinduism, Islam, Judaism, consider forgiveness as a virtue to which humans should try to attain (Cameron & Caza, 2002; Rye et al., 2000). Investigation of religious perspectives on forgiveness can be advantageous to social and behavioural scientists in several ways: the way religion influences the psychological process involved in forgiveness can be profound; it can help the scientists to recognise the richness and diversity of conceptualisations that exist rather than falsely attributing forgiveness as a rigid construct; and it can be the advantage to clinicians to appreciate the value of religious embedded character of forgiveness (Rye et al., 2000).

In Buddhism, the concept of forgiveness, the word "Abhayadāna" is suggested to be equivalent to forgiveness. Forgiveness is taught as the higher-order merit of principle of giving (dāna), because it is difficult for persons in general to forgive others who harmed them; however, if they can let go their revenge and grudge and, instead, grant forgiveness to the person who offended them, it is deserved as the greatest merit toward the forgiver, as a good moral conduct (H.H. Somdet Phra Nyanasamvara, 2008).

Buddhism also encompasses the concept of Karma, according to which good actions are rewarded with good, and evil actions with evil (Rye et al., 2000). The word Karma, or Kamma in Pali language, means action or volition. Karma is in the main used as a designation of the law of cause and effect functioning through action (Bhikkhu Yogavacara Rahula, 1996). Karma can be performed through three ways: 1) Kaya-Kamma or Physical action; 2) Vaci-Kamma or Verbal action; and 3) Mano-Kamma or Mental or cognitive action. These actions can be either good or bad; a good is called Kusala-Kamma and a bad one is Akusala-Kamma (Plamintr, 1997). Thus, we see that Karma, the law of cause and effect, is a faithful accountant. No one can avoid the consequences of their own actions. Each person weaves his or her own way, whether it is good or bad. Each person builds and affects his or her own future (Bhikkhu Yogavacara Rahula, 1996). In addition to the recognition of forgiveness and the strong belief of this action-consequence principle, Buddhism sees the world as fundamentally just, and this

justice is maintained by Karma. They believe that holding a grudge after being offended will bring resentment from others toward the self in the future (Rye et al., 2000). The person who holds on to the resentment and seeks revenge may create deconstructive or hostile actions, which also is another Karma that people offend back against another. This may then give the person who is retaliating against the offense bad consequences, and the revenge will be continued as soon as another party stops to revenge.

Rye and colleagues (2000) conducted an interview about the concept of forgiveness in the major world religions. Charles Hallisay, a scholar on Sanskrit and Indian studies, who has a good knowledge of Buddhism, acknowledged that the notion of forgiveness comprises two factors, that is "1) the removal of an expectation of retribution, and 2) the renouncing of anger or resentment toward someone who has offended you." Both factors represent the transformation of attitude, and both are highly valued in Buddhist cultures. In forgiveness, the rejection of retribution stems from overcoming resentment towards an offender. Loving-kindness and pity, as Buddhist virtues, result in a change of attitude by which the victim is no longer holding a negative approach towards the offender.

Meanings of forgiveness in Buddhist literatures. Several Buddhist scholars mentioned definitions of forgiveness. H.H. Somdet Phra Nyanasamvara (2008) clarified that forgiveness is granting an act of condoning. The forgiver did not claim that the offense is a wrongful or harmful action. When forgiveness occurs in one's mind, his or her mental state will be discontinuing from the influence of anger, and will turn into a clear mind. Forgiveness is also defined as not holding any anger, grudge or revenge toward the offender. Attempting to let go of the negative attitude towards the offender is a way to practise what Buddhist teach about loving-kindness granting and the principle of merit giving.

Phra Dhammakosajarn (Buddhadasa) (1990) stated that forgiveness is the giving of three components: physical, verbal, and mental.

1. Physical or body forgiveness occurs when the victim is given an apology from the offender, then he/she accepts this asking to be pardoned.

2. Verbal forgiveness is telling the offender that he or she excuses how he or she was wronged by the offender.

3. Mental forgiveness is relinquishing the anger and revenge seeking.

Moreover, Buddhadasa also defined that forgiveness is seen as three practices according to the Buddhist principles of giving: 1) forgiving others and seeking to forgive, 2) not to take revenge or harm on others, and 3) practice the loving-kindness all day all night.

Piyasopon (n.d.) explained that forgiveness is the way to purify the mind from malice such as anger rumination, feuding, or vengeance. It is difficult for an ordinary person to forgive someone who harmed them, even if they are not practicing themselves. Forgiveness will be easier to achieve, if the victim attempts to take a perspective on the offensive circumstance, for example: 1) forgiveness is the way to perform meritorious acts, 2) the offender is just an ordinary human who born, becomes sick, and dies as we all do, so he/she can make mistakes or wrongdoing like us, 3) angry rumination is a serious negative Karma which is the retribution in future existence.

Phra Dhammakosajarn (Prayoon Dhammacitto) (2008) defined forgiving others as the way people purify anger from their mind. Buddhists have been taught to practice forgiving others by keeping their minds away from angry rumination or vengefulness.

Phra Brahmagunabhorn (P.A. Payutto) (2008a) stated that forgiveness is concerned with loving-kindness and compassion. When persons forgive others, it is to say that they give the loving-kindness and compassion toward others. Buddhism suggests how to solve the conflict problems with loving-kindness called Pacifism. Buddhism realizes that when persons grant the loving-kindness and compassion to solve their interpersonal conflict, they also have to practice the process of their thinking or wisdom. When pursuing an effective solution for interpersonal conflict, the person must both act with good intention by giving loving-kindness towards the other, and wisely think about the problem and how to deal with the problem. Granting forgiveness requires both loving-kindness and wisdom.

The Congruence of the Meaning between Western and Buddhist Literatures

From the review of the meanings and concepts of forgiveness, researchers found several congruences between the concept of forgiveness in western and Buddhist literatures as followings.

1. Forgiveness is the intra-individual mental or cognitive process which is affected by an interpersonal or social phenomenon in nature.

2. Forgiveness is concerned with the psychological process of cognitive, affective, and behavioural components.

3. Anger and anger rumination are the major factors leading to unforgiving, and it is important to relinquish these determinants.

4. Forgiveness also requires a prosocial change toward the offenders such as good intention, loving-kindness, and compassion.

5. Forgiveness requires the act of no revenge or vengefulness toward others.

Applying Buddhist Principles to Explain the Mechanisms of Forgiveness

Religious tradition is considered as one of the major factors influencing the forgiveness construct. Rye and colleagues (2000) mentioned that the researchers and clinicians interested in forgiveness begin to consider the benefits of conceptualisations of forgiveness as provided by religious traditions. They believed there is knowledge in the views of religions, which were considering this important topic long before psychological science emerged.

Phra Brahmagunabhorn (P.A. Payutto) (2008a) stated that forgiveness is the cutting off of revenge toward others. He clarified the pre-conditions of forgiveness by explaining the two acts of humans toward others and the truth of nature: loving-kindness and wisdom. These two factors would be harmonised to facilitate the victim's forgiving behaviour toward the offender. It means that victims finally have good will towards the offenders by the act of loving-kindness coupled with using their wisdom which refers to the process of thinking wisely, and pursuing the right view toward the problems or conflicts in order to gain a better constructive resolution.

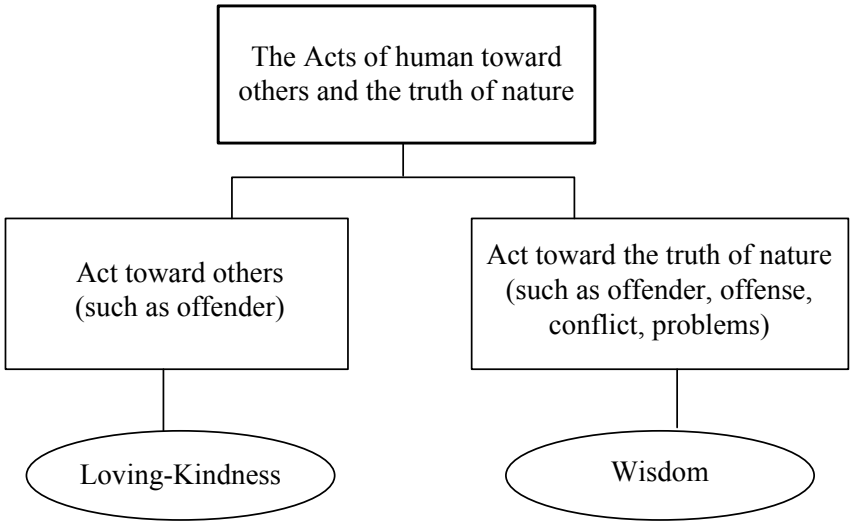

Figure 2.1. The act of human toward others and the truth of nature in Buddhist mechanism model of forgiveness.

The figure above represents two main constructs which would be proposed and achieved a hypothesised model of forgiveness to be tested in study3. The researcher begun to review the Buddhist literatures regards the mundane principles those two constructs, including their definitions, characteristics, relationships with forgiveness, and antecedents. To summary the portions of literature review covering those points, the topics would be presented orderly and the references would be cited in-text, as follows.

- The Buddhist concept of loving-kindness
    - Meanings and characteristics of loving-kindness
    - The role of loving-kindness in the forgiveness mechanism
    - Meritorious will as an antecedent of loving-kindness
    - Thinking wisely as an antecedent of meritorious will
    - Summary of loving-kindness path
- The Buddhist concept of wisdom
    - The process of wisdom in the concepts of the Noble Truths and the Middle Path
    - The concept of right view and its role on forgiveness
    - Perceived good friend and thinking wisely as antecedents of right view
    - Summary of wisdom path

The Buddhist Concept of Loving-Kindness

The concept of loving-kindness, or Mettā, plays a key role in Buddhist ethics. It is the way to cultivate the friendliness which benefits both the giver and receiver. Thus practicing loving-kindness is a meritorious action affecting an accumulation of good karma for the person who is granting it (Bhikkhu Nanananda, 2009).

Loving-kindness in Buddhism finds its place as the first of four kinds of contemplation designed to develop a better relationship to other living beings. The four are 1) Metta, which refers to loving-kindness, the wish to help all people attain benefit and happiness, 2) Karuna, which is compassion, 3) Mudita, which is gladness at others' success, and 4) Upekkha, which is equanimity. These four are the social benefactors called Divine Abiding or Brahmavihara (Nanamoli Thera, 2009). From this view, loving-kindness is considered as one of the factors, which encourages the social relationships among people.

Meanings of loving-kindness. Several Buddhist scholars have proposed definitions of loving-kindness. Phra Thepweti (P.A. Payutto) (1995) explained that loving-kindness refers to the positive construct approached through friendship, love, good intentions, empathy, and establishing a sense of common understanding and happiness among all beings. Loving-kindness is neutral, both in terms of who should have the loving-kindness and who should receive it. He clarified that authentic loving-kindness is indifferent to the conditions of the receiver, including seniority, rank, wealth, merit, or ordination. It is a basic Buddhist principle which builds a better relationship between people, looks at people in a positive and optimistic way, and enables them to accept others' points of view facilitating an exchange of ideas without feelings of disgust or aversion.

Phra Dhamma Kittiwong (2005) defined loving-kindness as wishing someone well, a feeling of friendliness and goodwill toward others. Loving-kindness is a mental state of being without anger and vengefulness, and wishing others to be happy, well, and flourish. In general, the term of loving-kindness can be inferred similarly as the love of parents toward their children. Loving-kindness also is considered as a virtue of leaders or mature people which results in respect and loyalty among subordinates.

Phra Brahmagunabhorn (P.A. Payutto) (2004) stated that loving-kindness is goodwill and amity. It is the wish to help all people achieve benefit and happiness.

Bhikkhu Nananada (2009) defined loving-kindness as sincere friendliness for people to both, themselves and others. When one is friendly to oneself, he or she will not harm himself or herself. When one is friendly toward others, one will not harm or abuse others. Behaviour resulting in the well-being of oneself and others is loving-kindness.

To sum up, loving-kindness is a state where the person behaves according to friendship, goodwill, empathy, and a wish to help others attain benefits, well-being, and happiness.

Characteristics of loving-kindness. In Buddhist literatures, there are several principles defining the concept of loving-kindness as a lesson for social living. These principles proposed the characteristics of loving-kindness which can bring advantage to individuals if they are continually practicing it in their everyday life.

The Fourth of Holy Abidings (Brahmavihara).This principle refers to the concept of the four mental attributes of a human being who is transcendent or grand-minded like a god, which are: loving-kindness, compassion, appreciative gladness, and equanimity. Phra Brahmagunabhorn (P.A. Payutto) (2008b) explained the characteristics of loving kindness, as follows:

1. Meaning of loving-kindness, loving-kindness is to wish benefits for all humans and animals or thoughtfulness wishes as if to their friends.

2. Loving-kindness is used toward others who are seen as ordinary persons.

2.1 Character, loving-kindness is a kind of supportive act toward others and animals.

2.2 Role, loving-kindness has a role that is about giving benefits to others.

2.3 Consequences, loving-kindness results in clearing up anger and vengefulness toward others.

2.4 Proximal antecedent, Loving-kindness brings benefit when seeing that others people live well.

3. Consequences, if persons practice loving-kindness, they will get calm and get rid of their vengefulness.

4. Conditions which reduce loving-kindness, the conditions that would reduce loving-kindness are lust and revenge.

Buddhist anger management process (Mettabrahmavihara). This principle is the Buddhist concept that refers to process of anger management by practicing to focus on taking the perspective of the offender, including ten steps of reflection (Phra Brahmagunabhorn (P.A. Payutto), 2007).

When persons remain angry toward the others who harmed them, they should act, as follows:

1. A first step is the reflection on the disadvantages of being a person who easily becomes angry, if the anger still remains then go to next step.

2. Second step is the reflection the bad effects of holding anger, if the anger still remains then go to next step.

3. Third step is the reflection on the goodness of the person who harmed us, if the anger still remains then go to next step.

4. Fourth step is the reflection that anger would cause us to be upset and pained, and this anger would punish us being gratified from the offender, if the angry still remains then go to next step.

5. Fifth step is the reflection that animals or mankind generally have their own Karma, if the anger still remains then go to next step.

6. Sixth step is the reflection on moral conduct and duties of Lord Buddha, if the anger still remains then go to next step.

7. Seventh step is the reflection on the dependant originality of nature which indicates that our life is dependent on others, if the anger still remains then go to next step.

8. Eighth step is the reflection on the good results of loving-kindness, if the anger still remains then go to next step.

9. Ninth step is the reflection on natural elements of its own characteristic. The person would critically reflect that their life is comprised of various elements such as corporeality, sensation, perception, mental formation, and consciousness. Anger is just one of our elements that should be eliminated from the whole. If the angry still remains then go to next step.

10. Final step is giving. The last method is to give the offender goods or politely speak with him. This method is effective in reducing angry rumination towards the other.

Principle of harmony. This principle refers to a useful participant of a community, who contributes to the peaceful co-existence of the community, possesses the principle of harmony known as the six conditions leading to mutual recollection (Sārānīya-Dhamma). This sixth principle indicates the benefits of three elements of loving-kindness for the social benefactor (Phra Brahmagunabhorn (P.A. Payutto), 2004), as follows:

1. Friendly action (MettāKāyakamma), people show kindliness and goodwill towards their colleagues, associates, and other community members by cheerfully helping them in their tasks, and behave in a courteous and respectful manner, both in their presence and in their absence.

2. Friendly speech (MettāVacīkamma), people notify the others about things that are to their advantage; they teach or suggest to the others with benevolence; saying only polite and courteous words, both in their presence and in their absence.

3. Friendly thoughts (MettāManokamma), people foster goodwill in their minds, thinking of ways to help others; looking at each other more positively, having a pleasant perspective and pleasant attitude toward each other.

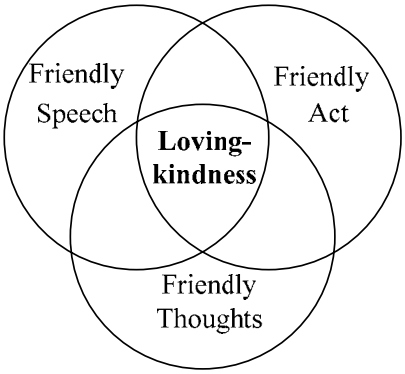

Figure 2.2. Concept of loving-kindness in Buddhist principle of harmony.

The role of loving-kindness in the forgiveness mechanism. Buddhism does not just teach people how to let go of hatred, but also teaches on how to grant loving-kindness to one another, and maintain a moral code of conducts (Phra Thepweti (P.A. Payutto), 1995). From the premise of Phra Brahmagunabhorn (P.A. Payutto) (2008a), the pre-conditions of forgiveness which is explained through the two acts of human toward others and the truth of nature (loving-kindness and wisdom) is addressed clarifying the role of loving-kindness in order to encourage victims to show good will toward offenders.

In the situation where persons are harmed by others, they generally feel angry and seek revenge. However, if they practice the loving-kindness toward others, as mentioned in Buddhism, they are likely to abandon revenge seeking, and it will be easier to grant forgiveness toward the offenders (H.H. Somdet Phra Nyanasamvara, 2008).

In the literature review on the nature of loving-kindness, the researchers found several premises in Buddhist literatures, which explain the role of loving-kindness on the forgiveness mechanism. Though these writings explained the advantages of loving-kindness on forgiveness, but there was no empirical evidence exploring the in-depth relationship between loving-kindness and the forgiveness process. This research initiates a scientific study to clarify a Buddhist principle, which has been taught from the past to make it more obvious to the behavioural scientists. The following section attempts to explore the role of loving-kindness on forgiveness from Buddhist and lay perspectives.

Direct effect of loving-kindness on forgiveness. From this view, Phra Thepweti (P.A. Payutto) (1995) stated that according to the Buddhist principle, the success of loving-kindness results in the discontinuation of vengeance seeking, which is seen as one

component of the definition of forgiveness, abandonment of a negative approach, in both western and Buddhist literatures. For instance, Phra Brahmagunabhorn (P.A. Payutto) (2009) clarified that, in fact, loving-kindness is a tool to maintain justice, because loving-kindness is neutral which causes people to live unselfishly, without the motivation to destroy others, and often to have positive, friendly wishes toward others. This practice brings benefits for mankind. H.H. Somdet Phra Nyanasamvara (2008) stated that loving-kindness is seen as the process of loving-kindness practice which tends to cut off anger defilement. The likelihood of granting forgiveness towards the offender is increased when loving-kindness has been enacted.

Though there is no scientific study directly revealing the role of loving-kindness on forgiveness, several empirical studies showed the positive correlation between loving-kindness and other related positive constructs. Hutcherson, Seppala, and Gross (2008) found that with just a few minutes of loving-kindness meditation increased feelings of social connection and positivity toward novel individuals on both extrinsic and implicit levels, this exercise may help to encourage positive affect and diminish social isolation. Otake, Shimai, and Tanaka-Matsumi (2006) showed that happy people scored higher on their motivation to perform kind behaviour. Subjective happiness was increased simply by counting participant's own acts of kindness for a week. Happy people became more kind and grateful through the counting kindness intervention. Moreover, Hietbrink (2009) found that participants committed to use loving-kindness to cope with a stressor reported better outcomes from the stressful event.

From the reviews above, research would presume that loving-kindness has a positive direct effect on forgiveness.

Hypothesis 1: loving-kindness has a positive direct effect on forgiveness.

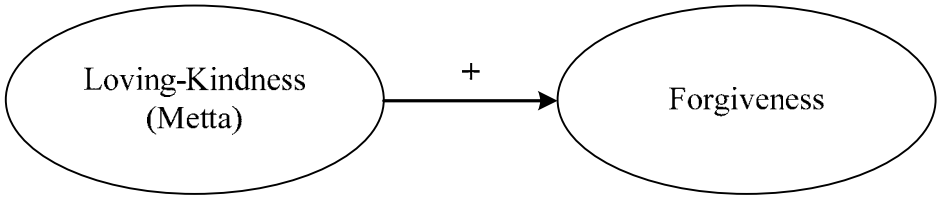

Figure 2.3. Direct effect of loving-kindness on forgiveness.

Meritorious will as an antecedent of loving-kindness. The person's wills, or Chanda as called in Buddhism, is a concept which Buddhism use to explain about human motivation to act or to behave. Will is the desire toward something admired or demanded by a person aiming to do good things. In terms of concept of motivation, Lord Buddha taught that will is the beginning of human learning, and it is a good side of human needs (Phra Brahmagunabhorn (P.A. Payutto), 2008c). A virtuous or wholesome will is one of eighteen characteristics of the great Lord Buddha which motivated him to persist throughout the period of pilgrimage teaching on how to be free from suffering, to be a good man, to be happy. He also felt happy with the task according to this wholesome will (Phra Brahmagunabhorn (P.A. Payutto), 2008c). In this vein, will is seen as the primary source of human motivation to complete their own tasks.

Phra Brahmagunabhorn (P.A. Payutto) (2008d, p.76) defined will in his Buddhist dictionary as "a heart of will, loving interest, desiring for truth and understanding, and being keen to do something for the love of it". In Buddhism, the will can be neutral, or demeritorious, or meritorious zeal. However, in general term as founded in Buddhist literatures, the word "Chanda" or will is considered to be a meritorious will which refers to wishing to act or doing a task to its optimum fulfillment. Moreover, Jindarat Peemanee (2002) conducted her research on the development of Chanda (meritorious will as Buddhist intrinsic motivation) in the learning of undergraduate students. She defined will as a wish to do or to see the good things, admiring the accomplishment of the task, loving good zeal, and which brought an activity or task to its completion. This meritorious will can be seen as a positive motivation to do wholesome things. For instance, Phra Brahmagunabhorn (P.A. Payutto) (2009) also stated that will is a mental state of being glad and satisfied. This wholesome will desires that mankind and animals exist with well-being according to their natures. The people who have good will wish that their environment existed within a state of goodness, rightness, orderliness, and wholesomeness. Moreover, he also clarified that meritorious will also means the aspiration to a quality of life such as loving cleanliness, wishing to be peaceful, loving nature, desiring a good environment.

Characteristics of will. Desire or want is the human motivation causing a person to act or to behave. In Buddhism, the term desire can be divided as two ways: craving

desire (or Tanhā); and meritorious desire (or Chanda). From this view, motivation can be explained as following (Phra Brahmagunabhorn (P.A. Payutto), 2004; 2009).

1. Meritorious desire is a wholesome motivation, such as wishing for good or moral things. This will has been considered as the important factor which encourages people to receive good benefits for their own livelihood. Meritorious will is a state where people desire to live with a wholesome well-being which encourages the growth, peace, happiness of themselves and others.

2. Craving desire is a demeritorious motivation, such as wishing for bad or immoral things. It is an unwholesome will such as immoral sexual urges, revenge, gambling, etc.

3. Action will is a will that leads people to act or to do according to their desire. This kind of will directly cause activities, which can be moral or immoral. However, in general term, action will can be seen as a good side of will which is one of four conditions leading to the success of any undertaking. This kind of will wishes to bring us to the activity of the task to its fulfilment with not simply doing it to get it out of the way or merely for reward or material gain.

People who govern their heart with meritorious desire or craving desire will result the differences in ethical or moral consequences. In order to examine this type of will in Buddhist literatures, Phra Brahmagunabhorn (P.A. Payutto) (2009) indicated when studying will (Chanda), it would better defined as meritorious will, which is a positive motivation of humans.

In summary, meritorious will can be defined as the mental state in which people desire to live with wholesome well-being encouraging the growth, peace, happiness of themselves and others. If the researcher views the concept of will as desiring the good quality of life, then we can infer that will, in the specific work context, is the desiring of the quality of work life (QWL) when conducting this research with nurses.

Meritorious will and its positive relationship with loving-kindness. Phra Brahmagunabhorn (P.A. Payutto) (2008c) described the mental state of emotion that people should truly develop for themselves called Buddhist emotional development. This emotional mental state comprises two sides of direction: 1) Internal emotional

development, which is the development of five emotional mental states, such as delight, joy, tranquillity, happiness, and concentration; 2) External emotional development, which is the development of four emotional mental states referred to as the social benefactor, such as loving-kindness, compassion, sympathetic, and equanimity. These two mental states are positive emotions attributed to the level of ethical or moral core which harmonising together to achieve the wholesome state. Indeed, these positive emotions are caused by meritorious will, especially the loving-kindness. Meanwhile, when considering the concepts of meritorious will and loving-kindness, there is a connection between these two constructs. Both meritorious will and loving-kindness are also the concept of authentic love, wholesome wish, and desire to encourage good quality of life. Naturally, there is a distinction between meritorious will and loving-kindness. In Buddhist teaching, meritorious will has a broader boundary and is used in a general circumstance being characterised as a disposition; however, loving-kindness is limited and is more boundary specific, concerned with only humans and animals, and having meritorious will as its antecedent (Phra Brahmagunabhorn (P.A. Payutto), 2009).

Hypothesis 2: meritorious will has a positive direct effect on loving-kindness.

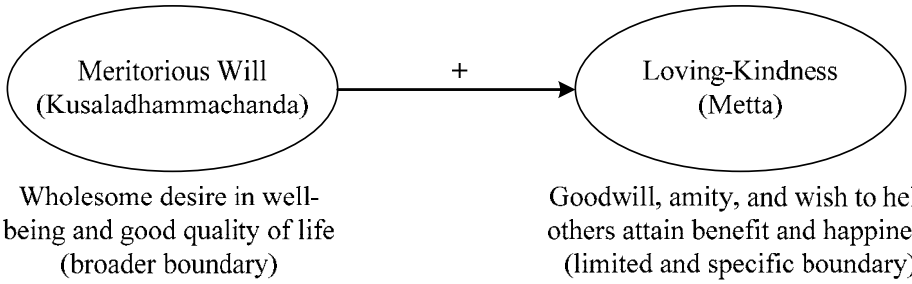

Figure 2.4. Meritorious will as an antecedent of loving-kindness.

A determinant of meritorious will. Meritorious will originates from an understanding of the truth about nature and the real beneficial value of life. If people persistently desire to do wholesome things for themselves, meritorious will will have occurred. The will is not only simply doing it to get it out of the way or merely for reward or material gain but also for moral and beneficial consequences for life (Phra Brahmagunabhorn (P.A. Payutto), 2008c). In addition, when persons investigate what are truths, benefits for life, and wholesome things in their life, they would properly use their thinking skills, knowing how to think, or being skilled in thinking which is seeing things

with critical reflection, and tracing their causes and effects. This process of thinking is called thinking wisely or critical reflection (Yonisomanasikāra). In this vein, the meritorious will is caused from thinking wisely about objects or problems.

Furthermore, a person would encourage proper understanding about the real beneficial value of life by using a process of thinking wisely. In order to achieve meritorious will, a person would use thinking wisely, as a process of wisdom, to relinquish ignorance and cravings in their mind. The role of thinking wisely is to induce the way of thinking that, in turn, leads to the prior state of meritorious will which has been developed a long time before. To sum up, thinking wisely would cut the cravings in the person's' mind, and lead to more moral or meritorious will.

Hypothesis 3: thinking wisely has a positive direct effect on meritorious will.

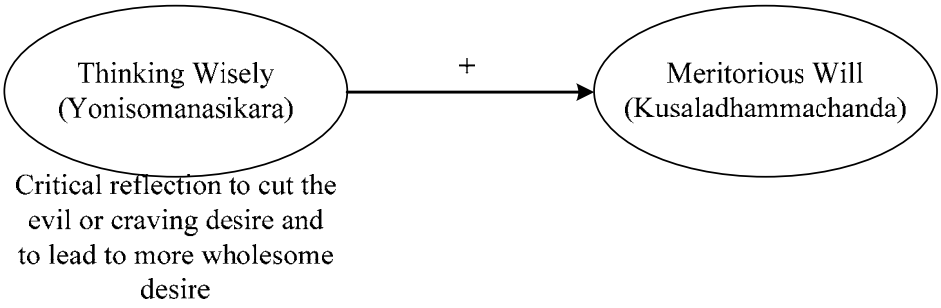

Figure 2.5. Relationship between thinking wisely and meritorious will.

From the literature reviews of meritorious will, the researchers can presume that the process of loving-kindness and its antecedents represent that thinking wisely will have a direct effect on meritorious will, then meritorious will has a direct effect on loving-kindness, and finally loving-kindness will affect forgiveness towards the offender as in the following figure:

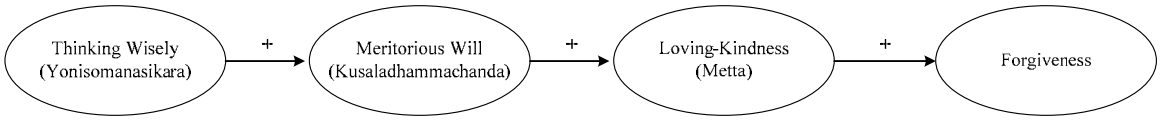

Figure 2.6. The path of loving-kindness and forgiveness.

The Buddhist Concept of Wisdom

Buddhism is the religious of wisdom. Lord Buddha had overcome the suffering and attained enlightenment by his own process of wisdom. In general, wisdom, or *Paññā*, is seen as a clear knowledge and understanding of all matters and ultimately the true nature of life and the world (H.H. Somdet Phra Nyanasamvara, 1979; Phra Brahmagunabhorn (P.A. Payutto), 2004). Buddhism is confident that individuals can develop themselves to attain the wisdom by learning, hearing, or practicing in their daily life (H.H. Somdet Phra Nyanasamvara, 1979). Wisdom is advantageous for laypersons as it helps them to solve the problems in their daily life. Wisdom would protect individuals by getting them to realise what are the meritorious ways, what are the unwholesome ways, and the ways leading to the growth.

Wisdom is an important element of various Dhamma or Buddhist principles. The researcher summarised several Buddhist principles, which include wisdom as an important component achieving meritorious acts toward livelihood (Phra Brahmagunabhorn (P.A. Payutto), 2004; 2008c), as follows:

Table 2.1

Examples of Wisdom Concept in Buddhist Teachings

Dhamma (Buddhist teachings)	**Wisdom as one of elements in Dhamma is called as**	**Role of wisdom**
Bhāvanā 4	*Paññā – bhāvanā*	To cultivate wisdom for the individual's growth
Sikkha 3	*Adhipaññā – sikkha*	To train individual for the extinction of all defilements and suffering
Samajīvidhamma 4	*Sama – paññā*	To be a quality which makes a couple well matched

Table 2.1 (continued)

Dhamma (Buddhist teachings)	Wisdom as one of elements in Dhamma is called as	Role of wisdom
Adhitthāna$_4$	*Paññā*	To be a foundation on which a tranquil sage establishes himself
Bala$_4$	*Paññā – bala*	To train individual for power and strength
Vesārajjakarana – dhamma	*Paññā*	To be a quality of intrepidity
Ariyāvaddhi $_5$	*Paññā*	To be a quality of development of a civilized or righteous man
Āvāsika – dhamma	*Paññavā*	To be a quality of an esteemable abbot
Ariya – dhana $_7$	*Paññā*	To be a noble treasure for persons
Pāramī $_{10}$	*Paññā*	To be a quality of perfection as Lord Buddha
Nāthakarana– dhamma$_{10}$	*Paññā*	To take responsibility for themselves and make themselves away from problem
Adhitthāna$_4$	*Paññā*	To establish oneself on a firm foundation

From the concepts of wisdom detailed in the table above, the researchers found that wisdom can be seen in terms of the quality of a good person, and the process or vehicle of becoming a good person. By the way, in this study, the researchers attempted to clarify the process of wisdom on the forgiveness mechanism so that the process view of wisdom in Buddhism will be addressed in this study.

The process of wisdom in the concepts of the Noble Truths and the Middle Path. The noble truths, or Ariyasacca, are important Dhammicprinciples, which are more generally known than any others. Phra Thepwethi (P.A. Payutto) (1995, p. 158) mentioned that:

> "when someone asks, what did Lord Buddha attain?, we can respond by saying that he came to know the Four Noble Truths; or we could say that he attained knowledge of dependant origination Indeed, the Four Noble of Truths are statements of truth related to human intelligence and the search for the fruits of practice".

In this sense, the Four Noble Truths are Buddhist principles linking to the historical search for the truth undertaken by Lord Buddha. The process begins with encountering suffering which becomes troublesome, and then continues to look for the cause of suffering. Subsequently, a way to solve problems was discovered which then leads to the attainment of the goal-completed freedom from suffering. The short details of this principle are, as follows (Phra Thepwethi (P.A. Payutto), 1995):

1. Suffering (Dukkha) is related to birth, decay-and-death, encountering unpleasant things, being separated from the things individuals' desire and unable to get the things individuals wish for. It is a condition which creates pressures, conflict, insufficiencies, and incompleteness – all of which yield a potential problem that may arise at anytime. For those still holding to these existences, their duty towards suffering is to realise it, attempting to clarify and understand its meaning and magnitude in order to proceed to the next stage of coming to a solution of the problems.

2. The cause of suffering (Dukkha Samudaya), or finding the origin of suffering, it is the desire to examine oneself, which results in negative consequences from pressure, anxieties, and fears. In this state of mind, individuals are obstructed and bound. The person's duty is to get rid of these obsessions, and move on to the next stage.

3. The cessation of suffering (Dukkha Nirodha), this stage is related to the complete eliminating of craving and involves disengaging oneself from desire ending the feeling of suffering. On the other hand, the discontinuing of suffering due to the abandonment of craving is not subject to the pressures of any anxieties, fears, or

attachments. It is deserved as a state of freedom, peace, clarity, and brightness. The individual's task is to make this state happened through continuing the path from the following stage.

4. The path leading to the cessation of suffering (Dukkha-Nirodhagāmimīpatipadā), this stage provides the Noble Eight-Fold Path to the extinction of suffering. The Eight-fold Path explains proper behaviour and practice which are detailed as Buddhist system of ethics called the Middle Path (Majihimā Patipadā)

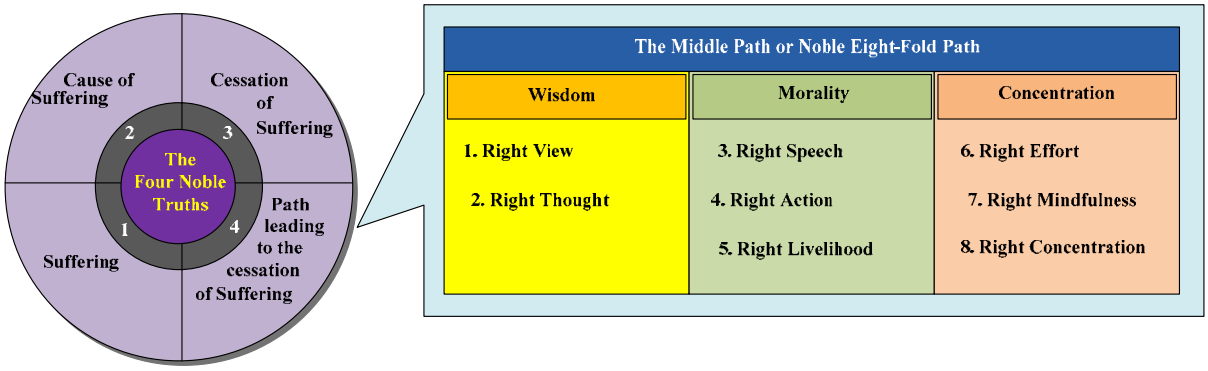

Figure 2.7. The system of Four Noble Truths and the Middle Path.

According to Buddhist principles, the middle path is a moderate practical code of conduct for both lay and non-laypersons. These eight folds are categorized into three fundamental modes of practicing, called Trisikha. There is training of wisdom, training of morality, and training of concentration. This threefold training corresponds to the Buddha's fundamental teaching as mentioned by Chanchamnong (2003, p. 168), that is "Not to do any evil (Morality), to cultivate good (Concentration), and to purify the mind (Wisdom)". The training of morality achieves for the development of physical and verbal actions under right speech, right action, and right livelihood. Training of concentration yields the development of right effort, right mindfulness, and right concentration. Training of wisdom achieves the development of "right view and right thought".

Phra Thepwethi (P.A. Payutto) (1995) stated that acting in correspondence with the Path should begin with the practicing of wisdom and ends with wisdom. That is to say, at the very beginning, knowledge, views, and beliefs should be established calling for

the right view. This understanding gradually increases until it becomes knowing and seeing things with complete wisdom.

In addition to the relationships among the eight-fold path, Phra Thepwethi (P.A. Payutto) (1995) explained that the right view is the starting point or the primary guide for anyone beginning the journey along the middle path. It is the principle supporting factor that plays a continuous role at each step of the way. In this vein, the researchers focused on the importance of having the right view which served as the starting construct of all wisdoms. In the sections below, the concept of right view is presented.

The concept of right view. The middle path is the way of having a clear objective, where individuals who practice have to know their goal before conducting the eight-fold path. The middle path of Buddhism is the way of wisdom which begins with the right view of individuals justifying the wholesome perspective of their world. In this vein, individuals would begin with understanding their problems and the goal of attainment of these problems. If there is no right view among individuals, they won't have a middle way, then, they have no cessation of suffering (Phra Brahmagunabhorn (P.A. Payutto), 2009).

Meanings of right view. From the Buddhist literature, Chanchamong (2003) explained that right view means right vision, right opinion, right theory, and right understanding, in the cause and effect of wholesome and unwholesome. Right view is considered as the first path of training in wisdom, where individual can develop an understanding of the truth.

Phra Thepwethi (P.A. Payutto) (1995) gathered the definition of right view in Buddhist literature and showed that right view is the understanding of suffering, understanding of the origination of suffering, understanding the cessation of suffering, and understanding the way suffering was extinguished. Moreover, right view is to know what is evil and the roots of evil, knowing goodness and the root of goodness.

Phra Brahmagunabhorn (P.A. Payutto) (2009) defined right view as the right understanding or to know what is moral. It means an individual would understand the causes and effects of goodness and evil acts. For the higher level of right view, the

individual would know the truth of things, such as the impermanent of life, and dependent origination.

To sum up, right view is the right understanding of individuals about their world. Individuals realise how to live according to morality or ethics, and realise on the causes and effects of wholesome and unwholesome behaviours.

Characteristics of right view. Phra Brahmagunabhorn (P.A. Payutto) (2009) clarified the classification of right view from the Buddhist perspective. He classified the right view into two kinds, which are different by level of understanding: mundane right view, and supra mundane right view.

1. Mundane right view (Lokiya-Sammāditthi) is the right view belonging to the world. This view is opinion, belief, and understanding about life and the world in accordance with morality and ethics. This kind of right view also refers to the knowledge of Karma. It means that an individual who has the right view would understand the causes and effects of meritorious and craving behaviours. The mundane right view is seen as a basic value, such as the responsibility for one's own actions, achievement of self perseverance or intelligence. Mundane right view can be measured by investigating the two right views: 1) understanding the behaviour in accordance with cause and effect or Karma; and 2) understanding the behaviour in accordance with what are beneficial views encouraging goodness or happiness for life and society (morality and ethics).

2. Supra-mundane right view (Lokuttara-Sammāditthi) is the right view which is not belonging to the world. This view is knowledge about the truth of the world and life or the state of nature. One who has this kind of right view will live it for the sake of Dhamma, such as for goodness and righteousness, out of love and lust, not for personal gains or for any selfish motives, out of revenge. Instead, they behave for goodness and freedom (Chanchamnong, 2003).

Because forgiveness is concerned with the daily life events which individual face, encourages the researchers to examine how wisdom affects forgiveness in daily life conflict situations. Therefore, the researchers preferred to study the right view in terms of its' mundane sense.

The role of right view on a forgiveness mechanism. In the literature review on the nature of the wisdom process, the researchers found several premises in the Buddhist literature which explains the role of right view, as a major variable in the wisdom process, affecting the forgiveness mechanism. There is no empirical evidence, which explored in-depth the relationship between right view and the forgiveness process; however, the researchers attempted to review the relationship between right view and forgiveness, as follows.

Direct effect of right view on forgiveness. From reviewing Buddhist literature, Tiansongjai (2007) described the process of forgiveness as part of self-development according to the Concept of Noble Truths. Individuals who practice this concept should begin with the proper understanding regarding human nature, expressing the right view towards the behaviour which attains good Karma and benefits for them (Phra Brahmagunabhorn (P.A. Payutto), 2009). From the research on the analysis of forgiveness in the Buddhist literature, Tiansongjai (2007) suggested the right view is the major wisdom antecedent which contributes to a granting of forgiveness. She clarified that before achieving forgiveness on an interpersonal issue, individual should begin with an understanding or belief about the behaviours which result in a good Karma or gaining benefits for social living. Individuals who are holding their anger towards the offender will still be possessed with hatred and revenge. One of the wisdom constructs in the concept of Noble Truths, which showed similar characteristics with forgiveness is right thought. Phra Dhammakosajarn (Buddhadasa) (1990) stated the forgiveness is characterised from the right thought, renouncing thoughts about hatred and renouncing thoughts about violence or taking revenge. The Buddhist wisdom process clarified that by possessing of the right view, the right thought would be achieved (Phra Brahmagunabhorn (P.A. Payutto), 2009). Hence, if the researcher considered the term or forgiveness as one characteristic of right thought, it can be presumed that right view would positively affect forgiveness.

From the review of Buddhist principles of wisdom above, the fundamental aim of Buddhist wisdom for individuals belonging to the social world is to achieve the possession of the mundane right view. This type of right view can be fulfilled by encouraging two dispositions: the first is to understand the behaviour in accordance with cause and effect (belief in the law of Karma); and second is to understand the behaviour

in accordance with what are beneficial views, which strengthen goodness and happiness for life and society (belief in the Buddhist morals or ethics). Therefore, possession of the right view reflects the dispositional intensity of religious belief and faith held by individuals. By considering the two dimensions of right view, several published papers were linked to disclosing the relationship between this construct and forgiveness.

For the right view in terms of understanding and believing in the law of cause and effect, Karma, the previous qualitative finding from the conceptualisation study found the facilitating role of participant's belief in Karma on the decision to forgive during the reattribution stage. Buddhists see the world as fundamentally just, and this justice is maintained by Karma. That is to say, individuals who strongly hold their belief in Karma would restore justice by letting the offenders receive their own negative results in due course (Rye et. al., 2000). On the other hand, holding on to one's resentment (bad Karma) after an offense will bring reversed resentment (result from a bad Karma) from others toward the self in the future. Victims who understand this law properly would rather respond with no revenge (Good Karma) instead of restoring justice by taking vengeance, displaying their beliefs about life being fair. In the western concept, research has suggested that forgiveness is associated with dispositional belief and fairness (Strelan, 2007). One is the concept of personal belief in a just world (Dalbert, 2002), which demonstrated that the more individuals believed that they get what they deserve, the less they experience intense feeling of anger. Lucas, Young, Zhdanova, and Alexander (2010) found that self-justice was indirectly positively related to forgiveness. Therefore, it could be inferred that there is a positive association between one's belief in justice and forgiveness.

The right view is defined in terms of understanding behaviour in accordance with what are beneficial views, which strengthen goodness and happiness for life and society. This character of right view is seen as an individual's belief in Buddhist morals or ethics. The persons who possess the dimension in this right view understand properly what is good or bad behaviour and how they should behave according to morals and ethics mentioned from Buddhist principles. The goodness and happiness would be returned as truth benefits for them. Several empirical studies on religious belief revealed the positive association between a strong belief in religion and forgiveness. For instance, Rye et. al. (2001) examined the psychometric properties of two forgiveness scales- Forgiveness

Scale and Forgiveness likelihood scale. They found that both forgiveness scales were significantly positively related to religiousness. Edwards et al. (2002) found a positive significant correlation between religious faith and forgiveness. Moreover, Konstan, Holmes, and Levine (2003) revealed that religiosity, emotional coping are predictors of forgiveness. Likewise, Webb, Chickering, Colburn, Heisler, and Call (2005) indicated that dispositional forgiveness was positively correlated with loving God concepts, and with religious problem-solving styles. Brown and Phillips (2005) demonstrated that intrinsic religiousness positively predicted both specific-offense and dispositional forgiveness. In a Chinese Hong Kong sample, Hui, Watkins, Wong, and Sun (2006) studied religiousness and forgiveness from the HK Chinese perspective. They found religious affiliation was the strongest predictor of the construct of forgiveness. From this evidence, it could be inferred that there is a positive association between one's belief in morality and forgiveness.

In summary, currently, there is no empirical evidence to support the link between the Buddhist wisdom concept of right view and forgiveness. However, the researchers could infer from the evidence above, which clearly links the two dispositions of right view and forgiveness, that right view would have a positive direct effect on forgiveness.

Hypothesis 4: right view has a positive direct effect on forgiveness.

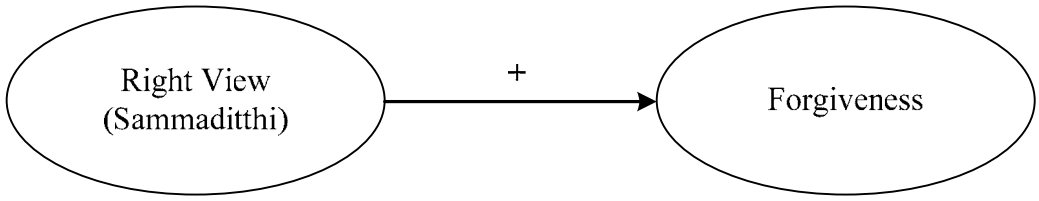

Figure 2.8. The relationship between right view and forgiveness.

Perceived good friends and thinking wisely as antecedents of right view. There are two sources of an individual achieving right view: perceived good friends; and thinking wisely (Phra Thepwethi (P.A. Payutto), 1995; Chanchamnong, 2003; Phra Brahmagunabhorn (P.A. Payutto), 2009; Phra Suthivorayan, 2009). In short, it can be suggested that 1) Knowing how to rely beneficially on the people and things around one, and 2) Knowing how to be self-reliant and also make oneself a refuge to others.

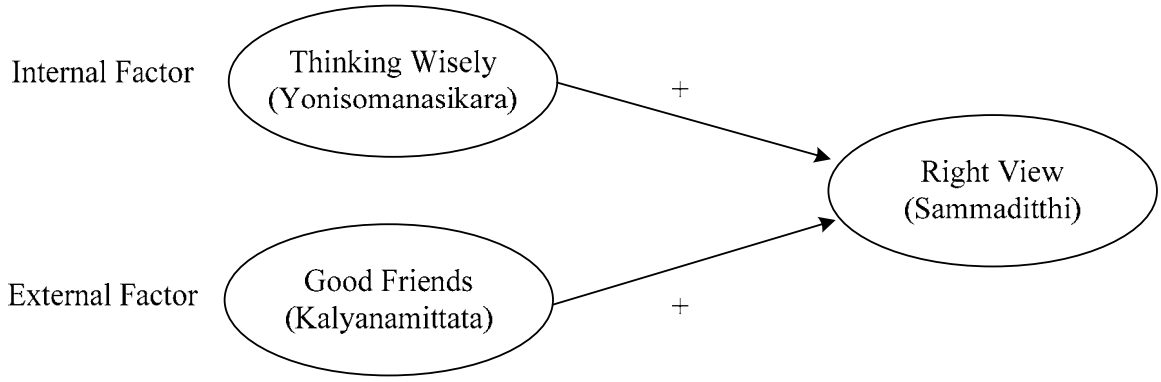

Figure 2.9. Antecedents of the right view representing the basic path of wisdom.

The concept of perceived good friends. Most people with undeveloped wisdom must still depend on the suggestions, supports from others and gradually follow these people until they achieve their own intelligence. Having good friends (Kalyānamittatā) is the condition which individuals have good friends who suggest, advice, teach, or giving information in order to encourage wholesome and helpful environments (Phra Brahmagunabhorn (P.A. Payutto) (2004). These companies are seen as the good external factor which creates and arouses the arising of wisdom. Furthermore, Chanchamnong (2003) state that having a good friend involves with individual's learning from others, another utterance, inducement or hearing. It is associating with the virtuous and others through the process of learning in a favourable environment from teachers, texts, literatures or other media. Right view can be established by listening to the teachings of others. It is a first stage which builds individual's feeling of confidence. In the system of Buddhist learning, persons initially set the sights on observing the teachings or suggesting of others, supported by a principle of good friendship or receiving spiritual advice from good friends.

In order to learn from others, as strive to be a wisely persons, individuals must live with good friends or good companies. Within the workplace, association with good friends is leading to attain the benefit. Individual discerns with people who are worth in associating with and does not associate with or emulates with those leading them downward, but associates with, studies and emulates people who are learned, worthy, capable, honourable, and endowed with qualities that are helpful to his or her livelihood (Phra Brahmagunabhorn (P.A. Payutto), 2004). The qualities of good friends which an individual would consider being their associates are presented by Phra Brahmagunabhorn

(P.A. Payutto) (2004). This kind of person should guide one's life along a path results in more prosperous and constructive. The four kinds of true friends or friends at heart are as follows:

1. The benefactor friend who has four features: a) When his friend is off guard, he guards him, b) When his friend is off guard, he guards his property, c) In times of danger, he can be a refuge, and d) When some business needs to be done, he puts up more money than requested.

2. The comrade friend who has four features: a) He confides in his friends, b) He keeps his friend's secrets, c) He does not desert his friend in times of danger, and d) He will give even his life for his friend's sake.

3. The advisory friend who has four features: a) He restrains his friend from doing evil or harm, b) He encourages him in goodness, c) He makes known to his friends what he has not heard before, and d) He points out the way to happiness, to heaven.

4. The cherished friend who has four features: a) When his friend is unhappy, he commiserates, b) When his friend is happy, he is happy for him, c) When others criticize his friends, he comes to his defense, and d) When others praise his friends, he joins in their praise.

In this study, the researcher investigated the external antecedent of right view, good friends, by operational defining this variable in concepts of perceived having good friends. From the review above, the researcher presumed that perceived good friends would positively direct effect on right view of individual.

Hypothesis 5: Perceived good friends has a positive direct effect on right view

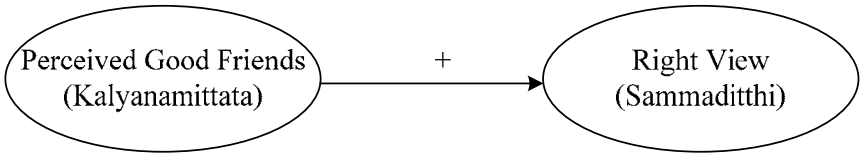

Figure 2.10. Good friends as antecedent of right view.

The concept of thinking wisely. Thinking wisely is a principle based on wisdom of internal significance. Yonisomanasikāra, or thinking wisely, critical reflection, or systematic reflection, constitutes a method to apply to a process of correcting one's thought. When individuals examine its role in the process of intellectual development, thinking wisely works beyond the level of confidence, as from learning and being support from good friends, because this is the stage at which people begin to think independently for themselves. Thinking wisely in the system of Buddhist learning and training, it is to practice the application of thought, coming to know the correct method of thinking in a systematic and critical manner. It is an important step in establishing wisdom, which is conducted by individuals who desire to help themselves in heading towards the final goal of the true Buddhadhamma (Phra Thepwethi (P.A. Payutto), 1995).

Phra Brahmagunabhorn (P.A. Payutto) (2004, p. 66) defined thinking wisely as

> "the proper use of thinking, knowing how to think, or being skilled in thinking; that is, seeing things with critical reflection, tracing their causes and effects; analyzing an object or problem in order to see it as it is and in term of its causal conditions until one sees its true nature and can solve the problem or bring about benefit".

Furthermore, he also stated that thinking wisely is one of the principles of the nobleperson. Individuals know how to examine, analyse, and research to understand the truth of a given circumstance, or to understand the perspective which will enable them to gain benefits from it. As a result, individuals are able to solve problems successfully through these methods which allow them to be self-reliant. (Phra Brahmagunabhorn (P.A. Payutto), 2004). Chanchamnong (2003) described thinking wisely as meaning analytical thinking by reason or thinking through the causal relationship in order to solve problems. Moreover, Phra Suthivorayan (2009) explained that thinking wisely means critical reflection, thinking in terms of specific conditionality, thinking by way of causal relations or by way of problem-solving, reasoned attention, systematic attention or analytical thinking.

There are ten methods of thinking wisely in Buddhist principles (Phra Sutthivorayan, 2009; Phra Brahmagunabhorn (P.A. Payutto), 2009), as follows:

1. Relative method or loop method, it is thinking in terms of causal law or conditionality of things.

2. Analysis method, it is thinking in terms of the thing and is collected from various elements.

3. Systematic thought about three streams of all things, it is thinking in terms of nature of humanity, which is impermanent, suffering, and non-self. This method encourages individuals not to fix or cling to themselves egocentrically.

4. Problem-solving method, it is the thinking method according to the four stages of Noble Truth.

5. Relation of Dhamma principles and its objective method, this method of thinking encourages individuals to think of the objective of the Dhamma principles before practicing it. This reflection results in individuals practicing their life's principles without unwholesome, delusion, or misunderstanding.

6. Advantage, disadvantage, and solution reflection method, this method leads individuals to reflect on the truth of things by carefully investigating the advantages, disadvantages; then, the individual can find what is the proper solution for himself/herself.

7. True value or artificial value method, this thinking wisely is concerned about what are the advantages of things or behaviour that one intended to do. This method is aimed to cut off or to diminish the individual from cravings in their mind. Practicing reflection on what is the true value or artificial value for one's life is important for one's livelihood.

8. Meritorious stimulation method, this thinking wisely intends to cut off and to diminish the craving motivation of individuals. This method is considered to be the basic practice for individual for encouraging their meritorious growth and their "mundane right view". Indeed, individuals persuade themselves by influencing their cognitive state what is the wholesome thing or unwholesome, then lead their motive to the wholesome perspectives and act in good ways.

9. Here and now method, this thinking wisely leads individuals to practice concentration or meditation in order to achieve mindfulness.

10. Vibhajjavadi method, this thinking wisely can be used to practice and answer the questions of people during preaching Dhamma to people.

In order to determine what is the proper method used to encourage the development of right view, Phra Brahmagunabhorn (P.A. Payutto) (2009) stated if individuals would like to develop their mundane right view in their daily life activities and situations, they would practice "the meritorious stimulation method" of thinking wisely. This method would eliminate the craving motivation, lead individual to the preparation and trait of the mundane right view. According to this notion, the researchers presume that thinking wisely, which is defined by the meritorious method, has a positive relationship with the mundane right view.

Hypothesis 6: thinking wisely has a positive direct effect on right view

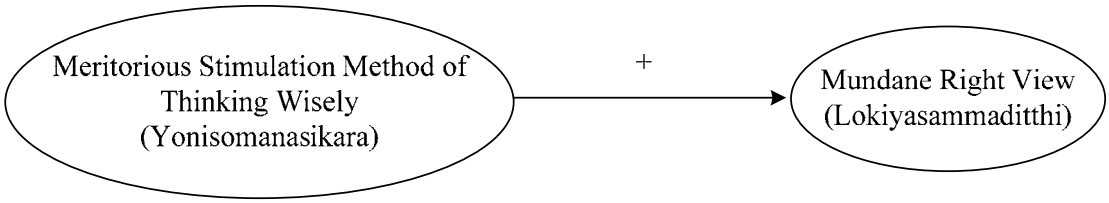

Figure 2.11. Meritorious stimulation method in thinking wisely as the condition for mundane right view.

From the path of the Buddhist wisdom process, in order to see all things correctly according to their true nature, thinking wisely must be practiced, with the complement of thoughts which are clear and free, without preferences, attachments, entanglements, and dislikes tugging at the individual in an adversarial manner. Moreover, the suggestions and supports from their friends also have been used to guide them to act in more socially desirable ways. Consequently, when individuals have thinking wisely, they have the right view-that is, seeing and understanding everything according to its true nature of Karma and understanding which acts will result in benefits for them, forgiveness is achieved. To sum up, we can link the relationships between three variables in the Buddhist view of wisdom, as follows:

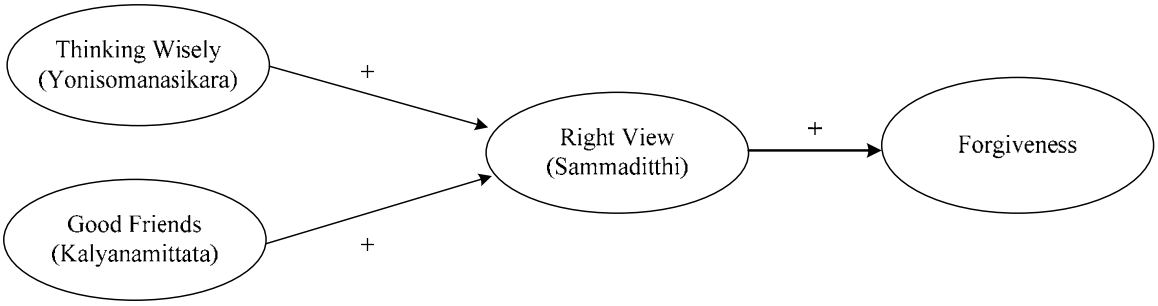

Figure 2.12. The path of wisdom and forgiveness.

Measures of Forgiveness

McCullough et al. (2000, p.65-85) summarised the taxonomy for categorising the existent measures of forgiveness to 3x2x4 dimensions: a) level of specificity (offense-specific, dyadic, dispositional); b) direction (granting forgiveness, seeking forgiveness); and c) method (self-report, partner report, outside observer, measure of constructive or destructive behaviours). Table below describes the examples of forgiveness measures which are categorized into the 3 x 2x 4 taxonomy. However, to make it simpler, the researcher re-organised the measures by 3 x 2 dimensions as level of specificity and direction. The last dimension, method, will be indicated in each measure details.

Table 2.2

Examples of Forgiveness Measures

Direction **Specificity**	**Granting Forgiveness**	**Seeking or Receiving Forgiveness**
Offense-Specific	<u>Self-report measures</u> - General forgiveness (Trainer, 1981; citing McCullough, Pargament, & Thoresen, 2000. Forgiveness: Theory, research, and practice. pp 69), a 9 items measure an absence of hostility, grudge holding, presence of positive feeling, and hopes for the offender's well-being.	- Meek and colleague (1995) assessed with one-item measure on the extent to which respondents would feel forgiven after confessing to the commission of certain transgressions.

Table 2.2 (continued)

Direction Specificity	Granting Forgiveness	Seeking or Receiving Forgiveness
	- Wade's forgiveness scale (Wade, 1987) developed an 81-items measure the nine dimensions of forgiveness. - Transgression-related interpersonal motivation (TRIM) (McCullough et al., 1998), a 12 –items scale measure the two negative motivational elements (avoidance and revenge). The reduction of these two motivations are considered to be equivalent to forgiving. Enright forgiveness inventory (EFI) (Subkoviak et al., 1995), a 60-items assess six aspects of forgiving another person: presence of positive effect, cognition, and behavior, and the absence of negative effect, cognition, and behavior.	
	Observer-report measure - Trainer (1981; citing McCullough, Pargament, & Thoresen, 2000. Forgiveness: Theory, research, and practice. pp 70) also developed the first measure of granting forgiveness to be completed by a trained rater. This measure was used only for validating the other scales that trainer developed - Malcolm and Greenberg (2000) developed a rating system for measuring offense-specific instance of forgiveness through analysing psychotherapy process videotapes.	

Table 2.2 (continued)

Direction Specificity	Granting Forgiveness	Seeking or Receiving Forgiveness
	Behavioral measure - The prisoner's dilemma game is a mixed-motive simulation in which two players are repeatedly faced with choosing either a cooperative or competitive strategy. Forgiveness has been operationalised as a cooperative move in response to the other player's competitive move (McCullough, Hoyt, & Rachal. 2000) - Laboratory manipulation by presenting a self-esteem threats or insults to participants and the give respondents the opportunity to behave in some way toward the person who is the source of esteem or insult (McCullough, Hoyt, & Rachal, 2000).	
Dispositional measures	Self-rating measures - Willingness to forgive scale (Hebl & Enright, 1993), a 16-items measure that instructs respondents to read 16 scenarios in which they imagine themselves to have been damaged by another person. Respondents choose ten hypothetical responses to each offense to indicate how they expect to respond the offense and how they prefer to respond to the offense. - The forgiveness likelihood scale (Rye et al, 2001) assesses how likely respondents would be to forgive in 15 scenarios described in one or two sentences.	

From his summary, the researcher found that most of the forgiveness scales existing in the literatures are self-rated offense-specific measures which intend to assess the extent to which a person has forgiven a single interpersonal transgression. Several scales of this type of measure were reported as good quality instruments in the previous academic literature, for example, Wade's Forgiveness Scale (Wade, 1987), Transgression-related Interpersonal Motivation (TRIM) (McCullough, Rachel, Sandage, Worthington, Brown, & Hight, 1998), and Enright Forgiveness Inventory (EFI)

(Subkoviak, Enright, Wu, Gassin, Freedman, Olsen, & Sarinopoulos, 1995). In this vein, the researcher presumed that the empirical way to measure forgiveness within the situation of workplace relationships is to design an instrument which captures the specific interpersonal offense. Getting the raters themselves to report their thoughts, feelings, and behaviours towards the offenders would represent the circumscribed interpersonal forgiveness process accurately.

The Hypothesised Model of the Present Research

Overall, from the reviews of forgiveness and its nature in both western and Buddhist concepts, and the role of loving-kindness and wisdom processes on forgiveness mechanisms, the researchers found that forgiveness is included in various Buddhist principles. These principles have been taught for more than two thousand years and have been encouraged among Buddhists to practice by their own effort. The results of these practices seem to be a subjective phenomenon. For this reason, in this study, the role of loving-kindness and right view, as a major variable of forgiveness in loving-kindness and wisdom processes are empirically clarified, by examining the hypothesised model proposed, as follows:

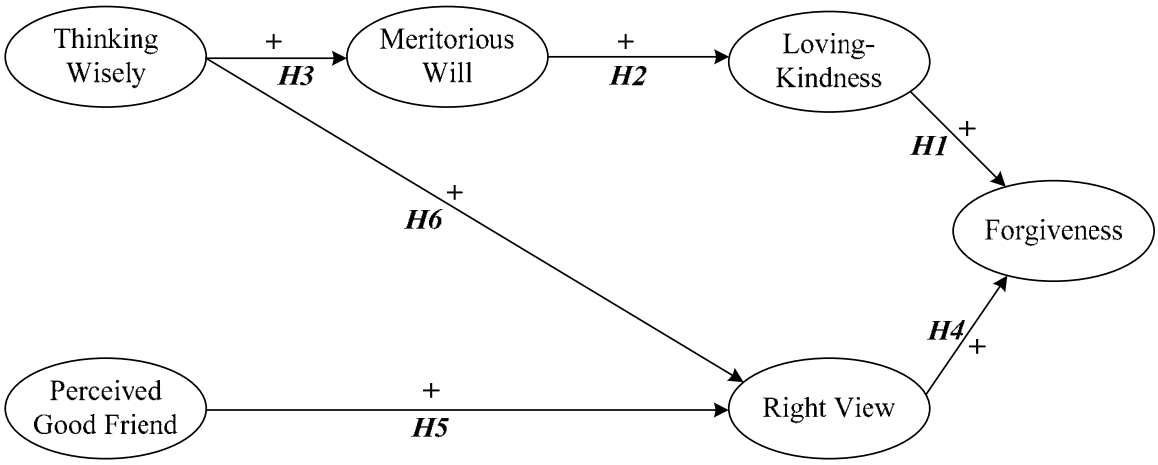

Figure 2.13. Hypothesised model in this study.

CHAPTER 3

METHODOLOGY

The current research was aimed to understand the phenomenon of forgiveness within work-related Thai cultural context by conducting three studies: The first study was intended to conceptualise the forgiveness construct within the work context of Thai nurses. The qualitative method was used to understand and identify the concepts of forgiveness from the experiences of Thai nurses. On the second study, several qualitative findings were applied to produce the initial items of the forgiveness scale and it was quantitatively examined to determine the underlying factor structure, replicability, and construct validity. The last study, it was aimed to empirically examine the structural model identifying the role of loving-kindness and wisdom processes on a forgiveness mechanism applying from Buddhist perspective.

The portions below are the summary of the methods being conducted to complete all of three studies. However, the more detailed explanations of each method are presented in chapter 4 for study1, chapter 5 for study 2, and chapter 6 for study 3, respectively.

Population and Sample

The population for this research are Thai nurses, which representing Thai layperson and the person who experienced work-related interpersonal offenses with their colleagues, who are working in the public and private hospitals in the central area of Thailand. The reason regarding to the selection for nurses to be the population on this research were subjected to this study due to the salient nature of work which requires a high cooperation and forgiveness is deserved to be a constructive strategy used to maintain their teamwork.

In study1, the participants for this study are Thai nurses who work in both public and private hospitals in Thailand. The researcher selected the participants using multiple-case sampling in order to gather the various experiences of conflict from the nurses (Miles & Huberman, 1994, p. 29-34). The sampling frame was implemented by type of organization (government and private hospital) and operation units as the case sampling

dimensions. However all the hospitals were structured slightly differently, and they did not all have the same operational units. To overcome this problem, the decision was made to select interviewees from as wide a range of units as possible and to try to ensure fairy even coverage of private and government hospitals. This required that the samples for this study consisted of thirty cases.

In study 2, for the development of psychometric sounded measure of forgiveness, the sample was drawn by cluster random sampling from nurses who work in 168 hospitals located in Bangkok metropolitan and the surrounding central area of around 100 kilometres. The researcher also attempted to collect data in various clusters of the operational units. The adequate sample size was determined by using five times the number of scale items as suggested by Gorsuch (1983). In this study, the number of items in the initial scale is 40; as a result, the adequate number would be at least 200 participants. The researcher officially contacted the directors of the hospital for permission to collect. The final data was obtained from 348 nurses from three hospitals.

In study 3, the sample was drawn by cluster random sampling from nurses who work in 219 hospitals located in a central area of Thailand under the administration by the Ministry of Public Health. The data were collected from the participants working in the various clusters of the operational units. To determine minimum sample size necessary for structural equation modelling examining the hypothesised model in this study, the researcher conducted the procedure as proposed by MacCallum, Browne, and Sugawara (1996). The researcher calculated the minimum sample size by generating R code from Preacher and Coffman (2006). This code was further analysed by R Statistic Package resulting 201 participants minimally required for this study. The sample size calculation process is detailed later in chapter 5. After a month of data collection, the total participants were 350 nurses from five hospitals.

Instruments

In this section, the instruments conducted in all of three studies are provided by the summary format. The detailed characteristic of each instrument is provided within each chapter, for instance, interview guide is provided in chapter 4, instruments used for the construct validation are provided in chapter 5, and instruments used for structural model testing are presented in chapter 6.

Instrument for the first study. The qualitative method was used to understand and identify the concepts of forgiveness from the experiences of Thai nurses.The researcher constructed an interview schedule following the interview guidelines in Lawler-Row, Scott, Raines, Edlis-Matityahou, and Moore (2007) which aimed to explore the participants' experiences about the offensive event and forgiveness. For example, the nurses are asked to describe a time *"when a colleague at work deeply hurt or disappointed you and you later forgave him/her for doing it"*. Then, the following details were included: *"Who deeply hurt you or caused you to feel angry?", "His/her behaviors or actions that caused you feel angry of painful?", "Why did you forgive him/her/them?" ,"what does forgiveness mean to you?"* , and *"Is reconciliation necessary to forgive others in the work context?"*

Instruments for the second study. In this study, the Forgiveness Scale was achieved to measure specific-offense forgiveness. It was then analysed its underlying factor structure and the psychometric properties. By achieving these methods, several measures were used as follows:

Measure for exploratory factor analysis. Initial 40 items of forgiveness scale was designed based on the results from first study in order to measure forgiveness towards a specific offender within a specific work-related offense. The scale instructed the respondents to choose the answer that best described their thought, feeling, and actions towards the person who has hurt or mistreated them in the past by using a Likert-type format with response possibilities ranging from 1(*strongly disagree*) to 6(*strongly agree*).

Measures for convergent validation. 1) Offense-specific forgiveness was measured by the forgiveness scale (Rye, Loiacono, Folck, Olszewski, Hiem, & Madia, 2001), the scale included 15 items within two subscales, negative forgiveness and presence of positive forgiveness. Participants were scored on a Likert-type with five rating scales from *strongly disagree* to *strongly agree*.

2) Dispositional forgiveness was measured by six items of Heartland Forgiveness Scale (Yamhure-Thompson & Snyder, 2003). A scale intends to capture the likelihood to forgive others. Items were rated on a 7-points Likert scale from *almost always false of me* to *almost always true to me*.

3) State forgiveness was measured by an item developed by the researcher. A scale was asked to the participants to rate *"how much do you forgive to the specific offender in your work relationship conflict"*. Item was rated ranging from 1 (*I haven't forgiven at all*) to 5 (*I have completely forgiven*).

Measures for nomological validity. 1)Willingness to reconcile was measured by two items of the Willingness to Reconcile Relationship (Tomlinson, Dineen & Lewicki, 2004), these items were *"what is the likelihood that you would continue a relationship with him/her?" and "To what degree are you willing to let him/her try to reconcile the relationship with you?."* The participants rated five Likert-type range from 1 (*least*) to 5 (*most*).

2) Rumination was measured with the Rumination About an Interpersonal Offense Scale (RIO) (Wade, Vogel, Liao, & Goleman, 2008). Six items were used to capture state or situation-specific rumination reflecting the repetitive cognitive rehearsal about the specific past transgression. Items were assessed by five Likert-type range from *strongly disagree* to *strongly agree*.

3) Seeking to revenge was measured with the revenge subscale of Transgression-Related Interpersonal Motivations Inventory (McCullough, Rachel, Sandage, Worthington, Brown & Hight, 1998), five items of revenge subscale were rated by five Likert-type rating range from *strongly disagree* to *strongly agree*.

Furthermore, two scales from the convergent validity were included in the model examined the nomological network of forgiveness construct and its related variables. They were forgiveness scale and dispositional forgiveness.

Instruments for the third study, Six scales were conducted to measure the variables included in the hypothesised model of forgiveness mechanism incorporated by Buddhist perspective. 1) The 23-items of The Forgiveness Scale developed and validated from the second study was used to measure forgiveness towards a specific offender within a specific work-related offense in this study. The scale was included with four dimensions: Overcoming Negative Thought and Feeling towards the Offender, Seeking to Understanding the Offender's Reasons, Fostering Positive Approaches towards the

Offender, and Belief in the Benefits of Forgiveness. Items were placed on a Likert-type format with six rating scales from *strongly disagree* to *strongly agree*.

The other five measures were developed from the literature reviews and theoretical backgrounds of Buddhism. 2) The Loving-Kindness Scale was operationalised through the concept of the principle of harmony (Phra Brahmagunabhorn (P.A. Payutto), 2004, p. 23-24), which defines loving-kindness including three dimensions of the social benefactors: friendly thought, friendly speech, and friend act. Fifteen items were developed, with five items belonging to each dimension. The items were designed in terms of offense-specific responses by instructing the respondents to choose the answer which describes best their behaviour towards the person who has hurt them in the past. The items were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*.

3) The Right View Scale was achieved by the concept of mundane right view (Phra Brahmagunabhorn (P.A. Payutto), 2009, p.737-740), which refers that right view would be measured by the investigation of two components: 1) Understanding the behaviour regarding cause and effect or Karma; 2) Understanding the behaviour regarding what are considered as beneficial views which encourage goodness and happiness for their own life and society (morality and ethics). Thirteen items were developed, with 5 items linked to the Understanding Behaviour in accordance with Karma subscale and 8 items linked to the Understanding Behaviour in accordance with Beneficial View. All items were measured in terms of a dispositional scale representing the likelihood of their response in general inter-relationship conflict circumstances. The items were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*.

4) The Meritorious Will Scale was a single unidimensional scale. It was operationalised by the concept of meritorious will by Phra Brahmagunabhorn (P.A. Payutto, 2009, 510), which defined meritorious will as an aspiration to a good quality of life such as loving cleanliness, wishing to be peaceful, loving nature, desiring to live within a good environment. The researcher developed the 8 items on this scale within the work-context reflecting a desire for good quality of work life in general. The items were

placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*.

5) The Thinking wisely Scale was a single unidimensional construct operationalised by the concept of meritorious stimulation method of thinking wisely (Phra Brahmagunabhorn (P.A. Payutto, 2009, p. 737), which intends to cut off and to diminish the craving motivation of individuals. This method encourages meritorious growth and the mundane right view among individuals who are practicing it. The process of this method is individuals focus their cognitive state on what is the wholesome or unwholesome thing, then lead their motive to the wholesome perspectives and act in good ways. Twelve items on this scale were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*. Respondents were instructed to consider and reflect about the thinking strategies they use to deal with the specific offense of their inter-relationship conflict.

6) The Perceived Good Friend scale measures the inividuals' perception of having a good friend when they faced an interpersonal conflict with their colleague. It was operationalised using the concept of the true friends (Phra Brahmagunabhorn (P.A. Payutto), 2004, p. 2-3), which mentioned the qualities of a good friend should be of four kinds: the benefactor friend, comrade friend, advisory friend, and cherished friend. Twelve items, with three items linked to each subscale, were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*.

Data Analytical Strategies

This section provides a summary of data analyses conducted to this research. A more details of each of the analysis for study1, study2, and study3 are presented in the methods sections on chapter4, 5, and 6, respectively.

Analyses for the first study. The researcher conducted the recommended analytical methods from Miles and Huberman (1994), which suggested that data analysis consists of three flows of activity of case analysis: data reduction, data display, and drawing conclusion and verification. These steps are interrelated and iterative activities. Data reduction is continuous even after the first case was reported from data display. The later iterations of reducing and displaying data still be continued until the preliminary

conclusion are drawn presenting the common themes in each case and comparable across cases.

Analyses for the second study. The researcher implemented various data analyses assuring the psychometric sounded properties of forgiveness scale. The initial items of The Forgiveness Scale were achieved and were submitted to the exploratory factor analysis (EFA) using principal component analysis with Varimax rotation, and it was followed with the investigation of the underlying factor structure of forgiveness construct (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Costello & Osborne, 2005). The internal replicability was investigated through Bootstrapping method to indicate the invariance of the factors across the samples (Zientek & Thompson, 2007; Timmerman, Kiers, & Smilde, 2007). Assessment of reliability via cronbach's Alpha coefficient and composite reliability were examined. Two evidence of construct validity (Cronbach & Meehl, 1955; Hair, Black, Babin, Anderson, & Tatham, 2006) were implemented, convergent validity and nomological validity, indicating the theoretical related properties of forgiveness construct derived from the scale development.

Analyses for the third study. Two-step approach of SEM proposed by Anderson and Gerbing (1988) was applied for this study. The first stage is finding an acceptable measurement model. The confirmatory factor analysis for scale development was used to assure the prior hypothesis about the relationship of a set of measurement items to their linked factor (Netemeyer et al., 2003). The second stage, after establishing the measurement model, the structural model of the hypothesised model was examined; parameter estimates and goodness of fit indices are provided. The researcher considered whether the structural model was satisfactory fit with empirical data. If the finding showed a worse fit, several information including fit indices, standardised residual, and modification indices would be used to respecify the model (Kline, 2005).

CHAPTER 4

CONCEPTUALISATION OF FORGIVENESS WITHIN THE WORK CONTEXT

From the 1980s until now, the number of empirical papers and book-length treatments of forgiveness has increased substantially. The appearance of this theoretical and empirical research seemed to suggest that forgiveness was a concept whose popularity was on the rise (McCullough, Pargament, & Thoresen, 2000). However, within the management literature, organisation sciences have produced very little theory and empirical research on forgiveness in work contexts (Aquino et al., 2003; Madsen, Gygi, Hammand & Plowman, 2002). Madsen et al. (2008) suggested that understanding forgiveness in the workplace is a complex undertaking, and questions still remain for researchers in organisational behaviour to address the conceptualisation of relevant forgiveness related constructs.

Beside the issues among theorists trying to conceptualise forgiveness in work contexts, the ability to forgive is conceptualized within positive psychology as an important virtue found in all cultures. From this perspective, researchers and clinicians are encouraged to explore the roles of cultural and contextual factors, such as religious value and indigenous culture, in the diverse expression of this virtue (Sandage, Hill, & Vang, 2003). McCullough et al. (2000) note that the field of scientific study of forgiveness still lacks a thorough understanding of the influences of religion, culture, and life situation on people's understandings and experiences of forgiveness. Without addressing these issues, scientific notions of forgiveness are likely to be disconnected from human experience. In this vein, exploring the experiences of forgiveness related to the cultural-situational basis of individuals will benefit the in-depth understanding of the construct. This cultural understanding will allow for the development of measures of forgiveness that incorporate culturally specific factors and even contextual factors rather than the more generic measures found in the existing international literature.

For these reasons, the present study aims specifically to conceptualise forgiveness constructs in Thailand, which is the first step in understanding forgiveness in the work

context of Thai nurses. The findings from this research are expected to contribute significant knowledge about forgiveness in both Thai culture and work related contexts.

Method

In this study, qualitative inquiry and analysis was used to understand and identify the concepts of forgiveness from the experiences of Thai nurses. The researcher conducted qualitative methodology as recommended by Miles and Huberman (1994, p. 4). They suggested that "we think that social phenomena exist not only in the mind but also in the objective world and that some lawful and reasonable stable relationships are to be found among them". Moreover they present their approach as "Transcendental realism", which aims to explain the causality and to investigate to prove that each entity or situation is an example of explanation (Miles & Huberman, 1994, p. 4). Further details of the method are given later.

Participants

The participants for this study are Thai nurses who work in both government and private hospitals in Thailand. To collect interview data, the researcher selected the participants using multiple-case sampling in order to gather the various experiences of conflict from the nurses (Miles & Huberman, 1994). The sampling frame was implemented by type of organization (government and private hospital) and operation units as the case sampling dimensions. However all the hospitals were structured slightly differently, and they did not all have the same operational units. To overcome this problem, the decision was made to select interviewees from as wide a range of units as possible and to try to ensure fairy even coverage of private and government hospitals. This required that the samples for this study consisted of thirty cases. Within this sample, nearly all participants were female with only two male cases. Eighteen participants were employed in government hospitals and 12 in private hospitals. With regard to operational units, eight cases worked at a critical care unit, 7 cases in inpatient service, 5 cases in outpatient services, 4 cases in emergency units, 2 cases in community psychiatry, 2 cases in surgery units, 1 case in an internal control unit, and 1 case in an obstetrics unit. Sixteen participants were aged under 30 years, 9 cases were aged 31-40 years, 4 cases were aged 41-50 years, and one case was over 50 years of age at the time of the interviews.

Data Collection

Interviews were conducted in the participants' workplace when they had finished their shifts. The researcher officially requested permission to conduct the research from the heads of the hospitals of the interviewees. The schedule for the interview sessions were individually by contacting each of the interviewees in the various operational units. In the interview session, the interviewer asked the participant for permission to record his or her conversation, and the rationale and research aims were informed to clarify the interview's objectives. Each nurse allowed and signed the consent form for the researcher to conduct the interview about their experiences of forgiveness in the workplace.

The primary goal of this study was to collect meanings of forgiveness from nurses as a Thai layperson. This required instant real working definition rather than memorized conceptualisations or purely linguistic definitions so that the researcher firstly began with asking the participants about their specific work-related offensive experience. The researcher constructed an interview schedule regards the offensive-forgiveness experience following the guidelines in Lawler-Row, Scott, Raines, Edlis-Matityahou, and Moore (2007) which aimed to explore the participants' experiences about the offensive event and forgiveness. For example, the nurses are asked to describe a time "when a colleague at work deeply hurt or disappointed you and you later forgave him/her for doing it". Then, the following details were included: "Who deeply hurt you or caused you to feel angry?", "His/her behaviours or actions that caused you feel angry of painful?", and rating of seriousness, "How long did you feel angry or ruminate on this offense?", "How did you deal with your anger or desire for revenge?", "How fully have you forgiven the offender?". After receiving a response from the nurse, the interviewer may then ask "Why did you forgive him/her/them?" After being asked about the offensive experience and whether they had forgiven, the researcher also asked them about their definition of forgiveness, saying "what does forgiveness mean to you?" By having participants first describe a time when they forgave, and why, researcher hopes to activate any underlying cognitive schemata. Finally, the question "Is reconciliation necessary to forgive others in the work context?" was asked to understand the behavioural outcome of forgiveness in the context of work.

The conceptual framework of this study was achieved, figure 4.1, in order to identify the critical points to be studied, for instance key factors, constructs, and the presumed association among them. The researcher attempted to capture the data from each participants wishing to answer the questions that: what are the offense experiences among Thai nurses?; How could they cope with an emerging conflict situation?'; Do they all forgive?; Why do they forgive?; What does forgiveness mean to them?; and Is reconciliation necessary on forgiveness of other within the workplace?.

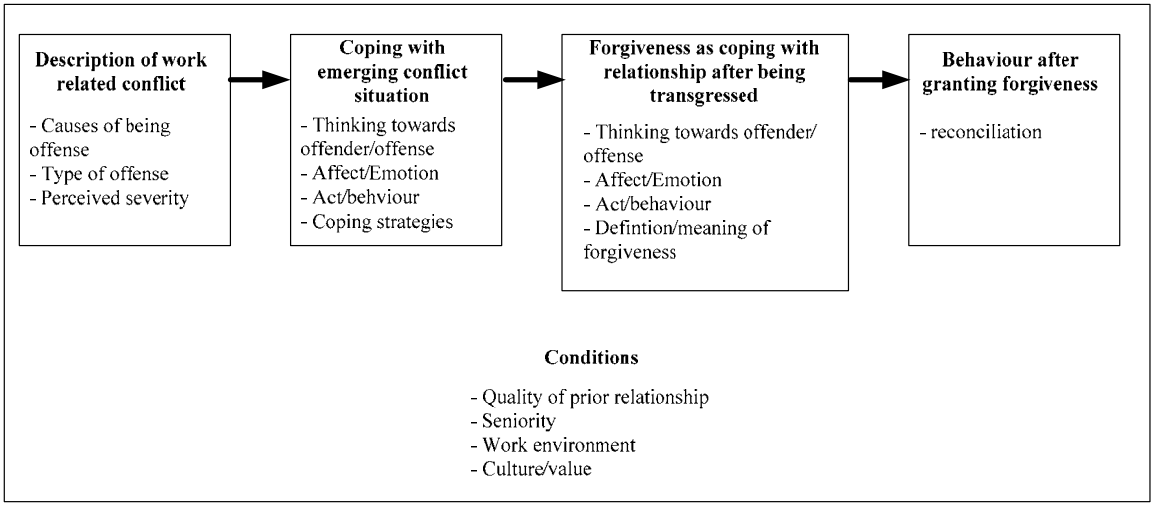

Figure 4.1. Conceptual framework for forgiveness study on work-related transgression.

Data Analysis

The analytic steps conducted in this study are consistent with the recommended analytical methods from Miles and Huberman (1994). They suggested that data analysis consists of three flows of activities: data reduction, data display, and drawing conclusion and verification. These steps are interrelated and iterative activities. Data reduction is continuous even after the first case was reported from data display. The later iterations of reducing and displaying data still be continued until the preliminary conclusion are drawn presenting the common themes in each case and comparable across cases.

Data reduction. Audio files of the interview conversations were translated into text form. Due to every conversations being in Thai, the researcher then translated the transcripts into English and they were then checked by a native English speaker. These data served as primary documents for further analysis. The analysis was begun with the

process of selecting, addressing, simplifying, and transforming the data transcribed from the participants (Miles & Humberman, 1994). Reducing the data was continuing until a final case was completed. The researcher made a decision on which of the data were included or pull out utilising with the conceptual framework. Codes were labeling from a set of transcribed documents reflecting meanings from data and used to retrieving and organising for further display.

In this step, descriptive codes were generated on the first round of case analysis. (Saldana, 2009).These resulted more than a hundred codes emerged. Secondly, the research re-read the transcription and its referred codes in order to achieve more interpretive codes. Descriptive code and interpretive code were used to summarise segment of data (Miles & Huberman, 1994). Finally, the pattern coding was conducted to group the summarised codes into smaller number of set constructs and themes. This coding process was implemented interchangeably with the next step of data display.

Data display. After sufficiently reducing data, data display was drew and verified the descriptive conclusions about themes and pattern showing interactions between constructs of participant's experience in forgiveness. The research decided to apply a systematic visual format of displaying to this step. Format of data display presented the detailed situation, the behaviours of participants in various kinds of work-related conflict, and the interplay of on conceptual variables (Miles & Huberman, 1994). The network type of data displaying, with a series of nodes or codes with associations between them, was applied enabling the researcher to focus on more than a few nodes or codes at a time.

For each participant as a single case, cognitive map coupled with causal networking method for within-case analysis were conducted (Miles & Huberman, 1994). With this single case method, the researcher could display the participant's representation of concept about a conflict-forgiveness phenomenon. These methods could clarify the researcher's ideas about the process and meaning of forgiveness drawing from interview transcription of each participant. The conceptual framework of the study was used to alert the researcher while conducting a causal networking; resulting on the plot of directional relationships and associated analytic text which identified the meaning of the association among the variables within the network.

After implementing each of single case display, later case was compared with the previous case. This is a cross-case explanation which moves from a single specific explanation to the results that link to the discovery of forgiveness construct. The multiple cases approach enabled this study to increase the generalisability of the conclusions and to investigate process and meaning of forgiveness across the different cases (Miles & Huberman, 1994). Four steps of a cross-case analysis using causal networking were conducted (Miles & Huberman, 1994). Firstly, as a result from single case analysis, the causal networks which represent the blocks listed of core variables, constructs, and their linked network concerning forgiveness were assembled. Secondly, the researcher began to identify the predictors of forgiveness and its conditions for one case. Thirdly, the pattern matching was discovered considering whether a pattern found in one participant was replicated in other ones as well. Finally, the verification for the similar outcome was achieved qualifying by the rules that the core predictor variables are the same, sequences are consistency, and the quotes within the variables in the network confirm the similarity across cases.

Drawing and verifying conclusions. Several tactics were used to test and to confirm meanings, reducing bias, and the quality of conclusions after gathering the preliminary findings through case comparisons (Miles & Huberman, 1994). To ensure the quality of meaning generated from the data, three tactics were used. The first was tactic of noting pattern and themes. The researcher found out the evidence of the same pattern or recurring regularities among categories and patterns of processes regarding to forgiveness process and meaning. The patterns of variables involving similarities and the contrasting evidences were identified. Secondly, during the drawing of network for a case, the researcher attempted to ensure a conclusion looked reasonable and make a good sense reflecting a plausibility of the conclusion. Thirdly, the counting tactic was conducted based on the patterns or themes which identified a numbers of times and consistently happened in the specific way. The computer software, ATLAS.ti, was used for this analysis facilitated this as numbers of patterns could be tracked, allowing some assessment of how frequent responses were among the participants. The counting tactic has several advantages including analyzing speedily from a large pool of coded data, verifying a conceptual linkage found from the cases, and to keep the researcher away from the bias and stand more honest.

Furthermore, in order to verify and confirm the conclusions, several tactics were used. The research checked for the representativeness of participants. The cases were selected which saliently represented the process of forgiveness among nurses within the context of work-related conflict with their colleagues, not with their patients. Also, the researcher checked for research effect by making sure that each participant understood an intention of the interview, kept thinking on the conceptually, re-checking the transcriptions and codes with another researchers on how we are being misled. Moreover, the triangulation by data sources was addressed included persons and places. The researcher collected data from participants who were working in public and private hospitals; large and small hospitals; and tried to find a source from various working units. This was help to ensure the generalisability of the findings. Moreover, during drawing a conclusion, making If-then test tactic was implemented. The researcher used the conditional future tense for If-then statement facilitating to formalize propositions for testing. Finally, some of the conclusions were compared and contrasted with the current literatures to determine if the findings were in consistency.

Results

The results are organized into two the aspects of forgiveness that we explored in the interview schedules, the process of forgiveness and participants' definitions of forgiveness. Data on the process of forgiveness will be presented first followed by the data on definitions.

Process of Forgiveness in a Work Context

Stories about offensive events and reactions to offenders reflect the experiential ongoing process from the initial conflict situation to the coping solutions of the respondents. As the researcher conducted the qualitative method aiming to understand nursing experiences as cases regards the forgiveness on work-related injured relationship, the within case and between case analysis of the data derived from the interview guide suggests that this is experienced as a process of forgiveness, arising from the original offensive situations. These conflicts lead to negative thoughts, emotions, and behaviours toward the offender, and victims attempt to use various coping strategies after experiencing the offense. Forgiveness is one of the positive strategies used by victims to maintain a peaceful working life. Moreover, when they decide to forgive offenders, it can

affect their later behaviours towards the offender for example by taking steps towards reconciliation. Furthermore, the process of forgiveness is affected by the social and work environment they are in. Analysis of the data in this study led to the identification of four stages in the ongoing process of forgiveness: an experiencing stage, a re-attribution stage, a forgiveness stage, and a behavioural outcome stage, as shown in figure 4.2.

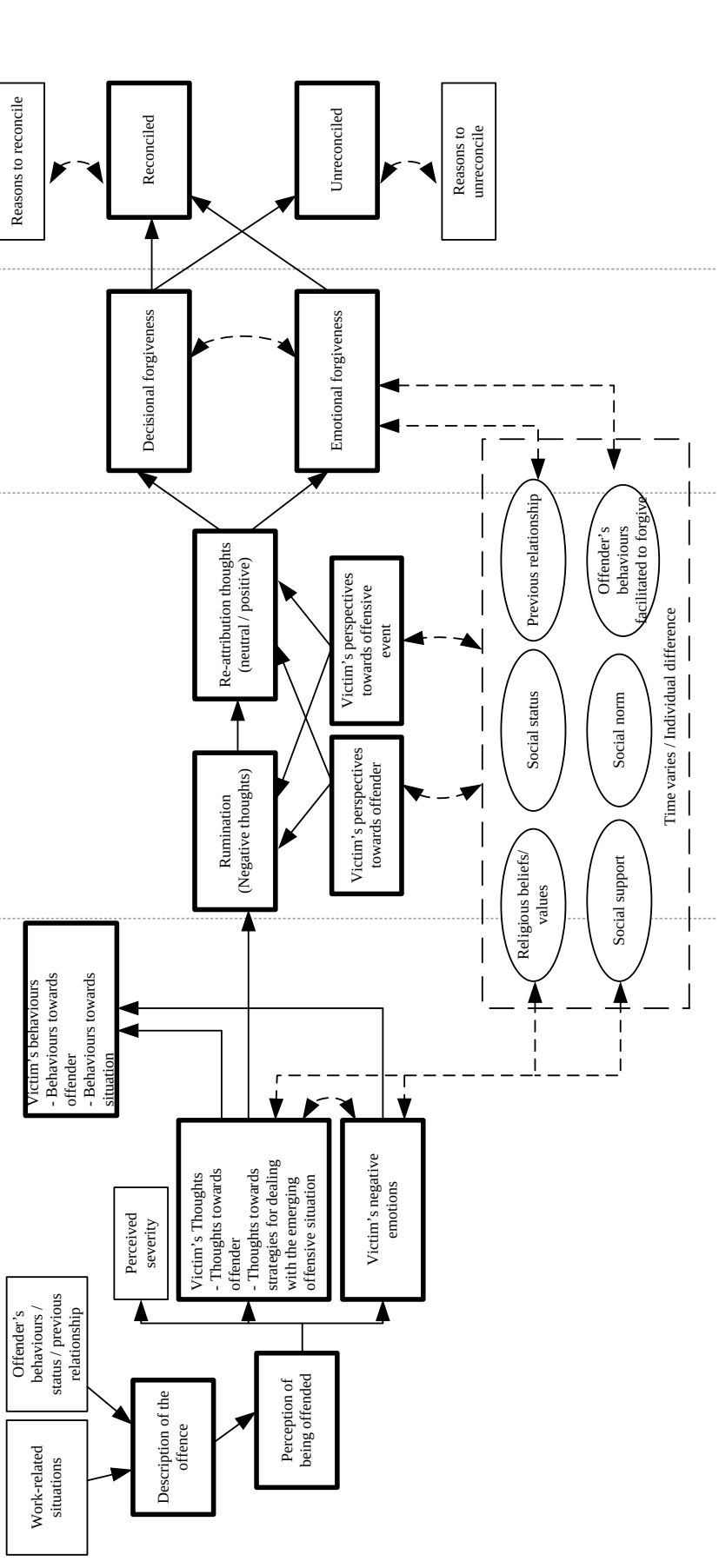

Figure 4.2. Process of forgiveness in work context.

Experiencing Stage. This is the first stage and refers to the situation that victims face when the offensive events occur in their workplace. These situations are perceived as a condition that can lead to victims feeling that they are being harmed by their colleagues. Offenders' behaviours cause the victims perceptions of being offended, even if the behaviour is voluntary or involuntary. Victims then assess the severity of the offence, within with this stage, negative thoughts and emotions exist towards the offenders. After that, they seek the coping strategies for the conflict situation, and this is a reaction towards the threat. The details of each stage of the process and the factors that appear to be considered at each stage will be presented in sequence based on the information that was collected in the interviews.

***Description of the offense*.** The analyses indicate that there are various causes of offence in work situations as shown in table 4.1, from the table it can be seen that the offender's misunderstanding of the interviewee was the most frequent cause of work conflicts for most of the participants (8 cases). The excerpt below is from B9, one of eight interviewees who explained that her offensive experience had resulted from a misunderstanding by the offender in their daily workplace contact. She said:

> When I went to the room, the doctor spoke to me in an unfriendly manner asking why I let the assistant nurse wake him up and how suddenly we came without the schedule. I said that I had already called to his staff about the patient 's X-Ray but there were no staff present in the room….The doctor said to me "How many years have you been working here?, Why did you not call to confirm with me before letting the patient inside?". I said that I had called to the staff already. He said that he could not accept that he was woken up by other nurses apart from his own staff. He wanted to report me to the inspector.

Some of participants, five cases, especially the younger nurses or newcomers, illustrated that they were harmed by their senior nurses or doctors because of implied professional incompetence. This was the second most frequent offensive situation. For example, B15, she narrated her work atmosphere during the first period of her working life:

> I'd just graduated from the university….I was always being scolded by my senior nurse. Though, it was meant to be teaching but I sometimes felt that I was

> criticised by my senior nurse. …One day, a patient came to the unit and complained to me about the hospital service. Then, she (senior nurse) came to me and began to lecture me, about the seriousness of our work, our work is about service, so we cannot overlook anything. I thought that the patient's complaint was not my fault.

Furthermore, there were three cases indicating that the injustice of their workload caused them to feel offended, such as the case of A22, she wondered why she had to be the first to care for the patient while there were a few senior nurses available. She said:

> In general, nurses can help each other to cure the patients in my unit. On that day, I was very busy with my case. While I was working at my desk, there was a patient who was not my case, asked for attention. My senior colleague, my offender, spoke loudly in my unit saying "why there is no one to answer this patient's request?" She spoke in order to blame me; it was about why I still stayed at the desk. I felt that she wanted to blame me in a way that made others know that it was my fault. It was because I was a younger colleague who firstly had a responsibility to do the collective work. I did not attend to this patient because I was working on my own work for my case.

Moreover, there are the others various conditions found that could lead to the victims' being offended such as an accusation of being ill-prepared for work, incongruence in perception of work responsibility, mistakes in job performance, social loafing in group work, uncooperative work behaviour of the offender, offender's bias, offender being intoxicated, offender being jealous of the victim's performance, and snatching the victim's task inappropriately. The range of the remaining causes illustrates that there is a wide range of circumstances that can potentially create conflict in the workplace.

Table 4.1

Selected Categories, Codes, and Their Frequency Derived from Respondent's Narratives

Category and Code	f	Category and Code	f
Description of the offense		*Perceived severity*	
Offender's misunderstanding	8	Very trivial	2
Offender implies professional incompetence	5	Quite trivial	7
Perceived injustice of workload of victim	3	Quite serious	16
Accusation of being ill-prepared for work status	2	Very serious	5
Incongruence in perception of work responsibility	2		
Mistake in job performance	2	*Victim's perspectives towards offender*	
Social loafing in group work	2	Seek to understand offender's reason - empathy	18
Uncooperative behaviour of offender	2	Continuing his/her working relationship	7
Offender's bias	1	Does not categorise as a wrongful act - reattribution	5
Offender intoxicated (alcohol)	1	Abandon of negative judgment	4
Offender jealous of victim's performance	1		
Snatch victim's task/position inappropriately	1	*Victim's perspectives towards the offensive event*	
		Retaliate is not useful	12
Perception of being offended		Conflict would affect to work negatively	7
Verbal attack	11	Offense is not a personal issue - distancing	4
Beneath victim's dignity (loss of face)	7		
Betrayal	4	*Level of forgiveness*	
Social loafing	2	Decisional forgiveness	20
Unfriendly manner	2	Emotional forgiveness	10
Behaviour is not within expected work norms of behaviour	2		
Perceived injustice	1	*Reconciliation*	
Team member mistake	1	Reconciliation is necessary in work context	23
		Reconciliation is unnecessary in work context	3
		Not answer	4

Note: f = frequency of code within the stories of thirty interviewees

Victims perception of offense. Perceptions of being offended vary depending on the interviewee's interpretation of the offender's behaviour. Various types of perceptions of being offended emerged from the respondent's stories and these are displayed in Table 4.1. One-third of participants (11 cases) expressed that they were attacked verbally during their daily conversation in the workplace. This was the commonest mode of offense. One of the nurses, B14, described her conflict caused by misunderstanding with the hospital courier. She perceived the verbal offensiveness from her offender as being quite serious. She said:

> At that time, I did not know that she was angry with me. She spoke to me and said to others in the unit that I was a swine....She said that I have a dog's mouth (It is a Thai idiom meaning reproaching or speaking badly). I said to her. "Can we talk together, I think you misunderstand me". She said that "if someone put his/her forefinger towards your face, would you be angry?" Then, I knew why she was angry with me. I said that I was sorry, it was not my intention, and I really wanted to apologise to her. Suddenly, she looked angrier towards me. She said "what you'd said to me is two-faced". I felt angry with her phrase and said "It was O.K., if you spoke to me impolitely, it does not affect what I would say to you again".

The next most frequent perception related to interpretation of the offender's behaviours in term of a perceived lack of dignity involving loss of face, especially if it is in contradiction to their identity within their social/work status (7 cases). For example, B13, She felt verbally harmed by the doctor whose profession is accepted as being of a higher professional status in Thai society. She said about losing face (being treated beneath her dignity) in the way she was treated by the doctor:

> I followed him to check on one of our patients. He asked me, "Has the patient already been examined for one of his symptoms?" I said that I was not sure because I had just come to the shift and I could not make the decision. Then, he turned to ask the patient. When I knew the information from the patient, he said to me, in front of the patient, that "The patient knew but you did not know anything"

As well as differences in professional status, some of participants reported that they experienced loss of face (beneath their dignity) from colleagues within their own profession who were of different work status or seniority. One of the nurses, A4, was crying while telling about her situation. She was offended by a younger colleague who displayed incongruence in the work procedure:

> In my opinion, I thought that nurses usually worked as friends and colleagues. We should have to sit and talk together over this problem like senior and younger colleagues. I attempted to talk with Jane about the reasons why the quality administrative unit wanted her to write her name on the urine bag. When I talked with Jane, she acted like I was not her senior nurse. She did not respect me. My status is senior and I wanted to talk rationally with her.

Furthermore, perceived betrayal was the next frequently observed perception of being offended (4 cases). For example in case B18, she felt that she was betrayed by her senior colleague. She said:

> She was my senior nurse. She was assigned by my supervisor to observe my performance. I felt terrible because I knew that she reported me on false grounds and it led my supervisor to misunderstand me. I later knew that she works like this. She always criticised my works and did not accept any of my opinions. I felt angry towards her. I did not want to interact with her.

The rest of the victims' perceptions of being offended founded in this study are due to social loafing, unfriendly manner, behaviour is not within that which is expected, perceived injustice, and a team member making a mistake.

Perceived severity. The interviewer asked participants to rate their perception of the severity of the offense. results showed different patterns of judgment amongst the cases, but the researcher found that more than half of participants (16 cases) rated their offense as quite serious, and major perceptions of being offended were accepted as quite serious is verbal attacks. For instance, A20, she acknowledged:

> Quite seriously, I did not like him misunderstanding me. My intention was good and positive, but how he acted to me was negative.

Victim's thoughts. When interviewees were asked to reflect on their thoughts at the time when they were offended. Two categories of thinking were expressed by the respondents: thoughts towards the offender, and thoughts towards strategies for dealing with the emerging offensive situation.

Firstly, the victim attempted to think about the reasons behind the offender's transgression. Several participants (5 cases) explained that at the moment of the offensive situation, they wondered why the offender acted unreasonably. In the case of A2, she said

> I felt that it was not reasonable and wondered why she had dealt with me like that.

Also, A4 illustrated another case of classifying the offender's behaviour as unreasonable:

> I think that she was this way because she is strongly self-centred. Why she did not consider. Was it my fault that I had to announce this work instruction? She did not accept what I had said to her and she tried to verbally retaliate.

Besides thinking that offenders had behaved unreasonably, some victims also attempted to seek to understand the offender's reasons. This cognitive process occurs in order to let victims understand the immediate offensive situation and to clarify the behaviours towards themselves and their offender using self-reflection followed by re-attribution of responsibility to themselves, what Weiten, Lloyd, Dunn and Hammer (2009), term self-attribution. In the case of A1, she was accused of being ill-prepared for her work role but she felt that this was because of the ineffectiveness of the team's communication of the work schedule. She was verbally abused by her supervisor. Minutes later after being offended, she was told that she had to think about her behaviour that led to the misunderstanding:

> I think, at that time, she (the supervisor) maybe thought that I suddenly came into the room like I came to take the work from another nurse who was on duty. It's like I did not prepare myself for being on duty and wanted to snatch the workload from another nurse who was on duty. So the doctor would see me as a good nurse. But I did not think like that I just did not know that the time had changed. She maybe thought that I was not responsible. I really don't know.

Some participants (3 cases) sought out the reasons for the offence by the transgressor by explaining and trying to take the perspective of the offender. For example, A4, she tried to understand her younger colleague's aggressive behaviour:

> How can I deal with this problem? I think that: firstly, she maybe had her own personal problem with her supervisor. Secondly, she perhaps possessed her own inferiority complex, and also her tendency is always to act like this to others, so I don't want to interact with her.

The second approach concerns the victim's cognitive processing of their thoughts towards strategies for dealing with the offensive situation. Some interviewees (4 cases) thought, in that situation, that they should avoid retaliating against the offender, and the

word "End" is found in their interviewees when they were talking about their thoughts about the offense, reflecting their desire to end the situation. One respondent, A2 said:

> The end is the end. I don't want to keep it in my thoughts.

Also, B9, she said that:

> He wanted to report me to the inspector. I wanted to end this problem, so I decide to apologise to him first. Though it was not my fault, but I had to end this conflict.

One participant, A1, said that she wants to end the problem by thinking how to avoid the offensive situation:

> It was quite serious for me. At that time, I thought that I might have to move to another surgical unit.

***Victim's emotions*.** When individuals are faced with unexpected harmful acts from offenders, their negative feelings emerge, as an emotional reaction against the transgressors. There are various types of emotions presented from participant narratives such as anger, disappointment, hurt, dissatisfaction, and fear. These negative emotions vary depending on the perception of being offended. The results suggested that offences perceived as verbal attacks mostly caused feelings of anger (7 cases out of 11 cases of perceived verbal attack). For instance, A21, she was angry towards the unfriendly critic of her senior nurse:

> I felt angry. She should speak to me with a good manner and reasonably.

Another case, B11, reported, when she was verbally attacked by laboratory staff about a delayed patient's record. She said:

> I felt angry towards him because he said "Why did no one write on the OPD card? And as I am a doctor, do I have to wait for a long time like this?"

Some participants, five cases, reported that they were disappointed by their offenders, for example A6, she disappointed due to the delay and indecisive work behaviours of her colleague:

> I felt quite annoyed and disappointed with this case. I think my hospital put the wrong man on the job. I felt tired.

Also, A3, her allocated task was suddenly taken away by her younger colleague, who was a friend:

> I felt so sad and disappointed about her saying that she wanted to do all the work by herself.

Others emotions found in this study are dissatisfaction, hurt, and fear.

Victim's behaviours. Behavioural reactions towards offenders appeared to be coping strategies adopted by the victims in order to deal with the immediate offensive events. The data identified two broad patterns of behaviours that were expressed which can be classified as non-oppositional behaviours and oppositional behaviours.

Non-oppositional behaviours are found in most cases in this research. At the moment of being offended, individuals behave in term of not retaliating against their offenders. The commonest behaviour reported by interviewees is staying calm (17 cases). For instance, A1 said:

> After my supervisor's response to me, I became calm and did not say anything, and just washed my hands.

One respondent, B8, described when she felt angry with her offender:

> I stayed calm. Though I felt I wanted to retaliate against her, but I chose better. To stay calm, I think it was not proper to confront her.

Staying calm in Thai culture, is not conceptualised as withdrawal behaviour towards the situation but instead individuals take this time to manage their negative emotions, which are likely to lead to more serious conflict if left uncontrolled. In case A25, he had to stay calm when being harmed by his colleague. He stated that this gave him time to manage his emotion effectively by using an aphorism:

> I have an aphorism and I usually use it when I feel angry. "I'm calm, I'm quiet, I'm tranquil. If you blame, admonish, or slander. If you invade or harm me, I will not retaliate towards you with my anger."

This reaction reflects a distinctively Buddhist response and is perceived to be an appropriate and even desirable way of coping (Phra Bhramagunaborn (P.A. Payutto), 2008a).

For some cases, eight cases, interviewees chose to avoid the offensive situation such as A7, she had to escape from the conflict situation in order to let her emotions calm down:

> I had to walk away from her. Fortunately, there was another senior colleague in this meeting. She let the meeting continue. If I had still stayed in the meeting, it would have led to more serious problems.

After being offended, some victims (7 cases) described how they kept greater distance from the offender. For example, B14, she said:

> After that, when she spoke to me, I also spoke to her politely but my distance is not the same. I did not initiate conversation with her.

Furthermore, some of interviewees (5 cases) said they attempted to focus on work to avoid thinking of the offense. They rationalised to themselves that if negative emotions were still there, it might affect their performance. Such a case is A1, she said that:

> I just paid attention to my tasks, doing my best, trying hard, not to think about this offense. I was attempting to provide a service for the patient so I would not think outside the task.

Another type of overt reaction, which is found in a small number of narratives, is oppositional behaviours. These behaviours are used in order to confront the offender. Some of the respondents (5 cases) showed assertive responses to their transgressor by explaining their reasons for being offended. In case B15, she said:

> I had explained my reasons and the facts with her.

Likewise, A21, she had to assert herself by giving the reason why she had made an error:

> She said that I had been working for a long time and why did I do it wrong. I said that it was because there were several folders about medical products. So I ordered

> some wrong things due to there being a lot of brands and I couldn't decide which one was correct. I gave my reasons to her and left the situation.

There are just two cases where interviewees retaliated verbally to the offender. For example, in the case of injustice of the workload, B5 challenged his senior colleague asking why she did not allow him to finish his shift. He said:

> She had to know that I also wanted to have my personal life. I spoke to her quite loudly asking why she did not allow me to go out after the shift. The reason why I spoke loudly is because I maybe was hungry.

The analysis of this first experiencing stage has demonstrated that conflict in the workplace can be caused by a variety of factors although misunderstandings are the commonest. This stage also included the nature of the victims' perceptions of the offense and its influence on their cognitions, emotions, and behaviours.

After being offended, experiencing stage, the range of time taken for re-attribution to occur can vary from a minute to several months. The researcher asked the interviewees about how long they ruminated towards the offenses. The response revealed half of the participants said their rumination were less than one day. The others said their rumination lasted for several days (9 cases), a week (3 cases), a month (1 case), and several months (2 cases), respectively. It is obvious that individual's negative thoughts remain as rumination may be varied. This repetitive thinking inhibits a positive approach towards the offender. For instance, Case A4 said “I felt terrible. I lost myself especially my feelings. I cannot restrain my mind about why she acted”. Like Case A7 had always felt angry when she was working with the offender, she mentioned “when I did my task with her, I tried to keep my mind calm. However, there were several times that I could not control my mind [angry]”.

In order to facilitate more constructive thoughts against the conflict, individuals need to change their thinking, so called re-attribution, towards both the offender and the offensive event. For example, Case A23 stated that when she ruminated angrily towards the offense, she had to induce her thought more positive, “when I was angry, I would have a consciousness in order to know what to do or not to do”. Like A30 said “If people are able to manage their thinking, feeling, and behavior effectively, the anger and

rumination towards the other would be decreased" The researcher has labelled a re-attribution stage.

Re-attribution stage. This stage refers to the cognitive process of transformation so as to neutralise negative thoughts, and/or increase more positive thoughts about the offensive event. It is an important phase which leads to forgiving behaviour. This process is influenced by the social/work environment, religious beliefs and values. Details of this stage can be described as follows.

***Rumination*.** This refers to the process where repetitive thoughts about past events re-occur. This cognitive process emerges after an episode of emotional experience such as anger resulting from conflict. The likelihood of rumination occurring about past anger is suggested to partially maintain and even strengthen the anger (Sukhodolsky, Golub & Cromwell, 2001). Rumination towards the offender and the offensive event is negatively associated with forgiveness in individuals (Barber, Maltby & Macaskill, 2005; Burnette, Taylor, Worthington & Forsyth, 2007).

***Re-attribution of thoughts*.** As a result of reframing their thoughts, individual's views towards the offenders and the offensive events change with the aim of decreasing their negative obsession into more neutral or positive thoughts. These constructive thoughts will encourage individual to decide to forgive their offenders. Victims are able to transform their thoughts by displaying empathy and taking the perspective of their offenders in the offensive event as describe in the paragraphs below.

***Victim's perspectives towards the offender*.** In order to re-attribute their thoughts, individuals attempt to reframe their views by taking the offenders' perspectives towards the offenders' behaviour. There are four perspectives found from the interviewees: seeking to understand the offender's reasons, comprehending the need to continue their working relationship with the offended, not categorising the offense as a wrongful act, and abandoning negative judgment (see table 4.1). These thinking processes appear to be intended to rationalise the offender's harmful acts and allow the decision to be made to abandon negative thoughts.

Firstly, more than half of our participants (18 cases) indicated that they tried to seek to understand the offender's reasons. This method is described as adopting an

empathic approach towards the offenders. Individuals take the perspective of the offender with the aim of understanding the causes of the offensive event from the offender's viewpoint. Some of the respondents empathised with the offensive behaviours of offenders in term of the character traits that the offender possessed. For example in the case of the perceived injustice of workload, B12, she was forced by her senior colleague to attend to the patient while her colleague was not doing any work. She said:

> I thought that we had differences in our background such as social, environment, and growth so that our character traits were not the same. At that time, she maybe has been pre-occupied with her thoughts. I understood about her character traits. I decide to let it go.

Another participant, A20, said:

> He was good at taking care of our patients except for his sharp-tongue. I know that his style is to easily be angered and have a sharp-tongue. I sympathise with him.

As victims tried to seek to understand offender's reasons, they reported that they put themselves in the other's place to clarify the offender's view towards the victims such as A22, she explained:

> I thought that she maybe did not know that I was working for my patient and I had to take my responsibilities for my patient seriously.

Another case, A23, reported that:

> I thought that he maybe did not know about what I had been doing while he was waiting for the bed….I thought he perhaps perceived that it was late because of me.

When individuals seek to understand the reasons for the offender's actions, they also attempt to understand the offender's situation. For example, A2, she said:

> At that time she was sitting on the chair and having her lunch. She maybe had not yet eaten any meal. She may be hungry or even tired. This is my thoughts.

Also, in case of A28, she was misunderstood by her colleague about the work rotation. She said:

> She may be worried about her new duty. We may have different views, and I did not communicate my intention to her because I thought that she would understand my intention.

Secondly, some of the interviewees (7 cases) explained that they thought about their continuing relationship with the offender. This perspective is apparent when individuals received positive responses from the offender after having been offended. As a result, individuals perceive that offenders seek to continue the working relationships with their victims. One participant, A19, said:

> My bad attitude towards her was gone due to the fact that she had been good with me. Later, she came and spoke to me politely. She did not hate me.

Also, A20, She reframed her view towards her offender more positively:

> Days later, he came to me and spoke to me politely so let my anger go. My colleague was surprised that I spoke to him politely. I was soft-hearted.

Thirdly, victims do not categorise what offenders had done to them as wrongful acts (5 cases). This perspective seems to emerge among the victims in order to decide to let go of negative thoughts towards the offenders. In case of A3, her task was taken inappropriately by her younger colleague. In favour of letting go of her negative thoughts toward the offender's behaviour, she does not categorise her younger colleague's behaviour as a wrongful act:

> I did not mind that what she had done is wrong. She worked hard. I think, she maybe neglectful.

One participant, B5 said that she did not want to personalise this issue to herself:

> My trait is that I do not include my work with my personal life. If she has done bad things, she will get an admonition from her supervisor or her colleague. The way I have to do with her is to talk politely with her.

Finally is the category of relinquishing negative thinking towards the offenders (4 cases). Individuals abandon their negative judgment with regard to the offender's behaviours. There are various reasons used by victims in order to abandon their original

negative judgment. For example, B8, she was verbally harmed because her colleague, the offender, felt jealous with the recognition that she was getting for her better performance. She said:

> When my colleagues told me that I was gossiped about by her, I said to my colleagues that let her do it because it was just her thought, not the truth. I forgave her because she did not benefit, or have an influence on my life. The persons who benefit me are my family members and my closest friends.

For example, A26 was treated beneath her professional image and dignity by an inpatient doctor. She that:

> It was not a serious problem. If I didn't think that it was as serious case, I would be OK. I had to stop by myself.

Victim's perspectives towards the offensive event. Another approach was for victims to re-attribute their thoughts and for individuals to then reframe their views of the offensive situation. This perspective leads victims to release their retaliatory thoughts, or even let go of their grudge towards the offender. It seems that individuals become aware of the negative outcomes of rumination. Three ways of perspective- taking towards the offensive situations were apparent in the interviewees: retaliation is not useful, conflict would affect their future work negatively, and the offense is not a personal issue (see table 4.1).

Foremost, respondents (12 cases) showed that they comprehended that retaliation was not useful for them. This reframed thinking was used by victims in order to evaluate the negative outcomes of offensive behaviour towards their transgressors. As a result, individuals relinquish their intention to retaliate, as retaliation is not just. This links with the Buddhist concept of Karma that will be discussed later. For example, Case A7, she was attacked verbally and repetitively by her colleague during the meeting. She said:

> I thought it was useless if I retaliated against her. There was only a bad result.

A24 explained that:

> I thought that retaliation against him was not good for me and him. It would cause us not to be able to face each other.

In a case of professional differences, B13, her competence was judged to be deficient by the doctor in front of a patient. She reported:

> I thought that if I retaliated against him, it was not a good outcome for me and him. I tried not to want revenge on him.

Moreover, participants (7 cases) indicated that they foresaw themselves that conflict would negatively affect on their work. This thought is reconsidered with regard to discontinuing the dispute with the offender. Some of the interviewees, for example the case of B9, where she was verbally abused by an X-Ray doctor due to his misunderstanding of her work procedures. She explained that if she continued the conflict, it would affect her work performance:

> I was afraid that my work would not flow smoothly. I wanted to work cooperatively with him and also want him to cooperate with me as well because we live with the same organisation.

In the case of A4, she was offended by her younger colleague because of incongruence in perceptions of work responsibility. She did not want to carry on the argument as it would damage the image of their profession. Her thoughts reflect Thai culture which is described as a high collectivist culture. Individuals who work in collective cultures feel strongly that they belong to an in-group, act according to the interests of the group or the normal expectations in such a society (Hofstede, 2001). As she said:

> I thought that if the conflict became more serious, it would affect the health professional image in our hospital. I thought we can manage this conflict in our nursing team. I hadn't thought that this girl was so serious.

In the case of injustice of workload, B5, he mentioned that the conflict may affect his career if he continues to ruminate about his senior colleague:

> When I was angry, my emotion continued and stopped at one state of anger. It was a moment I realised suddenly that if I retaliated towards her, what would happen in the future to my career?

Lastly, some of our respondents (4 cases) defined that offence as not being a personal issue. This is called distancing. They thought that transgressions are not directly related to their own self, but they concerned work. This means individuals perceived that the problem is distant from their own self. For example, A6, she was annoyed by her inactive supervisor which caused her to have more tasks to do. She explained:

> She improved her performance as I have said. It was not a personal issue. It was directly on the task.

As well as a case of B11, she was verbally offended by lab staff due to her patient's record being late. She reported that:

> It was OK because I thought that I spent as much time as it needed. I understood that it was a computer error.

Social/work environments affected the re-attribution of thoughts. From the interview narratives, the social/work environment seemed to play a role in decreasing negative approaches to the offenders. There are three social/work conditions related to victims' thoughts about letting go of negative thoughts towards the offender: social support, social norm and social status.

Social support refers to the mental and emotional support given by the victims' family members and/or colleagues to the victim. Individuals were socially supported by the people surrounding them in order to both buffer the negative impact from stressful offensive events and also to provide informational resources to reframe their thoughts positively towards the offensive event. Half of interviewees (16 cases) indicated that they were supported by their colleagues and family members after being offended. In a case of informational support, A3 said that, after the hurtful offensive moment from the offender, senior colleagues who were friends supported her:

> I talked with my senior nurse and my immediate supervisor. My senior nurse told me that there was not a problem, and I had to forgive her.

A28 was hurt by her colleague during a work rotation assignment. She explained about how she sought support from her husband and also her closed friend:

> I didn't think that she misunderstood my intention. I talked with my husband and my intimate colleague. They also said that I had to stay calm, do not assert or retaliate against her. I had to behave the same with her.

For instance, some of respondents narrated that they were supported emotionally in order to let go of their negative emotions against offensive event. For example, A27 was verbally abused by her supervisor. Later minutes after being attacked, she said:

> After meeting, my colleagues came and appeased me. I thought it was quite serious about me.

Along with B10, she was dissatisfied by the behaviour of government staff during mobile health service provision. After she came back to the hospital, her colleague sympathised with what she had faced:

> I had consulted with my supervisor. I was supported by my colleagues. They cared and asked to help….They understood and cheered me up. When I was consulted, I felt better and did not keep my anger.

Furthermore, social norms and status are a cultural aspect of the victim's ability to reattribute their thoughts towards the offender. These social factors play a role as social pressures with the aim of enforcing individuals to conform to norms of what is considered within the culture to be proper behaviour such as not retaliating, forgiving, respecting, etc. In consideration of the relationship between norms of enforcement and the socially desirable responses of the victims, the researcher found a major role for status in social pressure. In many instances, the words "younger colleague" and "senior colleague" are found from interviewees' narratives. That is to say, Thai culture accepts the hierarchy of status and sees it as very important. Seniority plays a vital part of this society as individuals should respect their elders and the persons who possess more superior positions (Klausner, 1993). Not to do so is perceived as behaving improperly. Individuals respect the seniority of others in their relationships and this helps to preserve the good image of their work group. When the victim is more senior than the offender, we found that victims thought that they should be friendlier towards the offender as they then looked to be a generous senior colleague. For example, A4, she said:

> When you asked me if I could forgive her? I forgave her as she was my younger nurse.

Also, in the case of B5, he explained about his condition to be more forgiving towards offender:

> What is the level of experience? If she was senior like me, I would still have some angry thoughts towards her. If she was my younger senior nurse, I would be more likely to forgive her.

When the victim is less senior than the offender, they have to relinquish their oppositional acts towards their senior colleague and produce benevolent behaviour. For such a case of A7said:

> She was older than me. If I retaliated against her, it would affect the nursing professional image.

In another case, A2 was verbally harmed by her senior colleague due to her misunderstanding. She said:

> I apologised to her. I think, whatever, she is still my supervisor. She is more senior than me. I acted like a younger colleague who did not retaliate.

Buddhist beliefs as a positive inducement to forgive. Buddhist beliefs contribute to positive approaches towards the offender due to their constructive methods and the resources they provide which can influence the victim's worldview about the offensive event. These beliefs also encourage individuals to decide to forgive their transgressors. Empirically, respondents showed that they were influenced by Buddhist beliefs as a means of dealing with emotional and relational problems. Some participants (4 cases) explained that they practised Dhamma, as taught by Buddha, in order to leave their negative thoughts and emotions, and turn to more positive ways. These practices are aimed to purify an individual’s mind against their anger and negative thoughts towards the offender in order to keep their mind away from rumination and vengefulness, also to approach them with more loving-kindness and compassion as taught by Buddha (Phra Dhammakosajarn (Prayoon Dhammacitto), 2008). In the case of A3, she said that she had to manage her disappointed feelings following on from what she had read from Dhamma

books. A28 said "I prayed to the Buddha for her (the offender) happiness." Also as in A7, she explained that:

> I tried to use the Dhamma to cope with my emotions. I prayed the loving-kindness towards her and stayed calm. I thought that if I could not stay calm, the person who suffered was myself. I talked to myself.

Another Buddhist belief that emerged during the reframing thought period from the respondents is belief in Karma. It is the belief in terms of the law of cause and effect operating through action, as good action is rewarded with good, and evil action with evil. Furthermore, Buddhists see the world as fundamentally just, and this justice is maintained by Karma. It means that victims who strongly believe in the law of Karma would restore justice by letting offenders receive their own negative results in due course. For example, A7, she said:

> I thought what she had done to me; it will come back to her.

In a serious case A30 was verbally abused by her drunken colleague during their work shift. She thought to herself with the aim of forgiving her colleague:

> I thought forgiveness is the most merit. If I forgive the wrongdoer, one day I may involuntarily do wrong to another. I would get the forgiveness from my victim. (She said the Sadhu… it means she hopes this thought will be effective in the future.)

This quotation from A30 is yet another example of how Buddhist teachings influence the process of forgiveness with the concept of Sadhu. It is an expression that is used at the end of prayers and is loosely equivalent to amen in the Christian religion. It represents the conclusion and the wish to let things happen, a good will message.

Lastly, two interviewees took the perspective that ruminating about the offense is causing suffering to themselves. Respondents included the word “Dukkha” in their narratives which is translated in English as suffering. In Buddhism, suffering refers to a painful experience and the unsatisfactory nature of human life. It can mean either physical or mental suffering, or the suffering which is inherent in change and comparing themselves with others, and also the suffering caused by clinging to things which are

impermanent. In fact, Dhamma guides people to an understanding of the causes of suffering (Lake, 2004) Suffering caused by ruminating on the event is seen to be deserved as it is perceived to be unwholesome to ruminate in Buddhism. Some of the participants showed that they were aware of these sufferings and they attempted to relinquish their suffering resulting from the offensive situation. In the case of A3, she said that she accepted the suffering of life:

> I think everything is immortal. I try to think positively.

Also, A4, who was seriously harmed by her younger colleague due to the colleague's disrespectful behaviour during their conversation, explained why she had to give up her rumination:

> I think that anger and resentment cause me suffering. She did not suffer like me.

After individuals attempted to reframe by taking perspective on their negative ruminative thought into more constructive ways, their negative cognition, emotion, and act towards the offender and the offense would be transformed to be neutral and positive. For instance, B12 said about her forgiveness after taking the perspective towards her offense.

> “I forgave her because I thought that we had differences in our background such as social, environment, and growth so that our character traits were not the same. At that time, she maybe has been pre-occupied with thoughts. I understood about her character trait. I decided to let it go”.

This is example of quotation presenting the cognitive reframing process which facilitates victims’ empathising with the offenders and leads to the next phase as called the forgiveness stage.

Forgiveness stage. This stage infers that victims have forgiven their offenders as a result of their re-attributed thoughts. The researcher found that two types of forgiveness emerged from the nurses' experiences: decisional forgiveness and emotional forgiveness (see table 4.1). Results showed consistent support for this forgiveness distinction first described by Worthington (2003).

Decisional forgiveness. This is when individuals decide to forgive as they have cancelled any thoughts of retaliation and no longer categorise the offenses as wrongful acts. Worthington (2003) explained that individuals grant decisional forgiveness and commit to controlling their negative behaviours towards the offenders, and restore the relationship to where it was before the offense occurred. Afterwards, victims attempt to eliminate their negative thoughts and emotions; however, it takes time to change their emotions and their motivation towards their offenders. That is to say, the decision to forgive helps to prevent negative behaviours such as retaliation or continuing the conflict, but the some of the negative emotions such as anger, fear, anxiety, or hurt still remain. Results showed that two-thirds of interviewees (20 cases) commit to decisional forgiveness with regard to their offenders. The researcher found this reflected by victims who decided to forgive their colleagues. In the case of A4, she indicated the decision to forgive with regard to her younger colleague's disrespectful acts:

> When you asked me could I forgive her? I forgave her as she was my younger nurse, but I really don't want to engage (personally) with this person. I should say no because I am anxious with her…. my feeling of love is run out. When I meet her, I also smile at her. I don't get angry. I don't hold a grudge or resentment towards her. Because I have to cooperatively work with her. I should set my distance from her broader. I wouldn't initiate interaction with her. If she wants my help, I will help her for just only the requirement….It is because my trust is not the same. I don't expect her to do anything for me. It's OK for her to do just the cooperation.

In the case of A7, she was offended verbally several times by her colleague in the surgical team. Though she said she had forgiven her offender, the negative emotion remained:

> I knew that it would be happening repeatedly. I tried to let it go. For this offense event, I already forgave her; however, I still worry that she will do it again.

In case of B12, she forgave her senior colleague in order to maintain their working relationship but the feeling of unjustness still endured in her mind:

> I forgave her….I decide to let it go. Sometimes, I thought it was not fair because we had the same status. We just differed in our experiences. Do I have to work as a younger nurse all the time?

Emotional forgiveness. It is defined as complete forgiveness due to individuals experiencing positive feelings of good will towards the person who hurt them. Worthington (2003, p. 41-42) defined emotional forgiveness as "the emotional juxtaposition of positive emotions against a) the hot emotions of anger or fear that follow a perceived hurt or offense, or b) the unforgiveness that follows ruminating about the transgression, which also changed our motives from negative to neutral or even positive." For this type of forgiveness, the positive emotions reduce or replace the intenseness of negative emotions with positive emotions, for example, empathy, compassion, love, etc. Victims show completely positive motivation towards their offenders. One-third of participants (10 cases) showed that they have fully forgiven their offenders. Some narratives are quoted in order to represent emotional forgiveness. For example, B16 felt unfairly treated by her senior colleague due to being assigned to write a report alone without any help. She said:

> I forgave her….I understand her, it was because she wanted me to learn how to work by myself. She wanted to teach me.

In case of A28, she was disappointed and was verbally abused by her colleague during the work rotation assignment. She explained:

> If I we keep fighting amongst each other and cannot forgive the other, it would bring me to feel uncomfortable and unhappy when I have to cooperate with her. If we forgive, let our bad emotions go, and try to think of a good side. I would get the benefit as happiness. If I fully forgive her, my mind will be truly happy.

The Offender's previous relationship with and post-offensive behaviours to the victim as conditions which contribute to emotional forgiveness. The researcher found some conditions which promoted emotional forgiveness: the existence of a previous intimate relationship and the offenders' behaviours after the offensive events such as perceiving good intentions from the offender and offender's act to continue the relationship

For example, some participants (4 cases) indicated that they have close relationships with the offenders before being offended. In the case of A6, she said:

> I suddenly forgive her. In general, she is good with me.

Another participant, A28 explained that:

> I forgave her because I have felt good with her for a long time. It seemed that she was my intimate colleague, and I was fond of her. We used to help each other.

In the case of A27, she was reproached by her senior colleague during a meeting with other colleagues. She indicated that the offender came and sought for forgiveness from her. She said:

> I knew she worked hard, and she was good inside. I had to see the good side of her. She apologised to me frankly.

Moreover, perceiving good intentions from the offender is also one factor which encourages emotional forgiveness (2 cases). During daily conversation between the nurse team, involuntary offensive acts occurred, especially from impolite conversations. For instance, A15 perceived that she was lectured by her senior about patient's complaints. Later, she realised that her senior colleague did not aim to harm her but rather wanted to teach her to be better in her profession:

> I thought she wanted me to pass the probation, so I have to learn more about my responsibilities. I thought she had good wishes towards me.

Like a case of A16, she reported:

> Because she spoke to me frankly saying that she wanted me to learn how to survive and she warned me to improve in my profession.

Lastly, narratives from some participants (3 cases) who emotionally forgave their offenders showed that when their offenders seek to continue the relationship, they would be likely to forgive them. In case of A20, she said:

> I intended that I should not interact with him; but when I met him and he spoke to me politely, my bad attitude was gone.

Likewise, A19, she said that her offender seemed to improve her behaviours and sought to continue their relationship:

> A day later, she came and talked with a good manner to me….She seemed to accept the mistake.

After the forgiveness stage, the emotions of the forgiver have been transformed into more positive feelings and harmonised with their re-attributed thoughts. This then affects their motivation towards the offenders. As a result, individuals may behave more positively towards the offender in order to maintain their working relationships. For instance, A3 mentioned that after granting her forgiveness towards the offender "if it is a work conflict which concerns the benefits of government or patient services, I would think I would reconcile and it is necessary for work with colleagues". Like A27 said

> "We had to adjust our understanding. I was happy when she gave her trust to me. She invited me to work with her projects. I tried to not confront her when she had a bad emotion. I felt good when I worked as a team with her"

These are examples of victims' behavioural responses after they granted forgiveness towards their offenders. This stage was revealed as follows.

Behavioural outcome stage. This stage refers to the victim's positive behaviours after they had decided to forgive their offender. This study was focused on victim's reconciliation towards the offender as behavioural outcome of the forgiveness stage. The question *"Is reconciliation necessary for the forgiveness of others in the work-context?"* was asked during the interview session in order to ascertain what individuals thought. Most of the participants said that, in their case, reconciliation was necessary for them to be able to carry on their working relationships and their performance at work. A few participants seemed to suggest that they were not continuing their working relationships with their offenders (see table 1). Narratives and reasons to reconcile or not to reconcile are discussed below.

Reconciliation is necessary for forgiveness in the workplace. Results showed that in every case of emotional forgiveness (10 cases) and nearly every case (14 cases) of decisional forgiveness interviewees saw the necessity of reconciling with their transgressors (see table 4.1). For instance, individuals who fully forgive their

transgressors accept that re-establishing relationships after being offended is important for them. For example in the case of A19, she said:

> It is necessary when I work in every unit because if we distrust others, it would affect our service.

Likewise, A20 said:

> It is necessary. I mean that we should forgive each other.

Similarly with case A28:

> I think reconciliation is the good thing that I should practice in my daily life.

Furthermore, in cases of decisional forgiveness, the respondents showed they reconciled with the offenders in order to maintain their work smoothly. For example, A21, she explained that:

> I think reconciliation is necessary for the work context. I have to interact with him.

Consistent with case of A29, she had to reconcile with her doctor after being disappointed. She indicated that:

> I thought I have to work with others all of my life. There will be one day that I ask for others' help. I cannot survive by myself.

According to case A1, she explained:

> Yes, I have to work together. We have to talk more reasonably. When you ask me if I'm fully reconciled with her, I think I'm OK with her as I was before the offense.

Reasons to reconcile. There are various reasons related to why victims decide to reconcile with their offenders after forgiving: teamwork, work performance, future career life, perceived good intention from offender, and a position of lower power than the offender. It seems that all of the reasons are concerned with work. Most cases of reconciled interviewees (10 cases) showed they felt that they should reconcile with their transgressors because they wanted to maintain teamwork. For example in case A2, she

decided to forgive and re-establish the work relationship with her supervisor but kept more distance. She clarified that:

> I just talk about the work and my duty, and if it is in my personal life, excluded it from my work life, maybe not. It was gone. We talk together just about our work. We can do this as a team, cooperate with each other.

In case of A19, she fully forgave the doctor in-charge causing her to be blamed by her supervisor. She said that:

> It is necessary….It would affect our service. The medication service has to work as a team. If we have a serious conflict, it would affect our performance. I have to reconcile and harmonise.

Moreover, work performance is considered to be one of the reasons to reconcile (6 cases). Such as case of A21, she said:

> I think reconciliation is necessary for my work. I have to interact with him. I want my work go smoothly, and have a good outcome.

Also, B9, she was verbally harmed by the doctor due to his misunderstanding. She explained:

> If I retaliated against him and he remembered me, it would affect my patient who has been served by him. If I didn't forgive him, there would be some doubt in my mind and his mind, and it would affect to my work.

Another reason is that they have to foresee their future career life (3 cases). For instance, in the case of B5, he had a conflict with his senior colleague due to an unfair workload. He said:

> I had to work for a long time. I thought about the bad result in the future of my retaliation.

Likewise, A29, she explained why she had to reconcile with her doctor.

> I thought I have to work with others all of my life. There will be one day that I ask for others' help. I cannot survive by myself.

A few of interviewees (3 cases) showed that they reconciled due to perceiving positive intentions from the offenders. Results showed this applied to younger victims being aware that senior nurses wanted them to improve their professional or work behaviours. For example, B16 said:

> Yes, because she had a good intention towards me. She wanted me to improve myself.

In the case of A27, she restored her relationship with senior nurse after being reproached in a meeting. She said:

> I thought that Chan was a nice colleague, and I had to speak to her frankly. We had to adjust our understanding. I was happy when she gave her trust to me. She invited me to work with her projects. I tried to not confront her when she had a bad emotion. I felt good when I worked as a team with her. She was a good colleague but there was something I had to sympathise with her about her sharp-tongue.

The last reason to reconcile with the offender is that of being in a position of lower power than the offender (2 cases). This condition related to work status in order to maintain their relationships as mentioned earlier that Thai culture values accepts the differences in social status which results in compromising more with the person who possesses higher senior or higher professional status. (Klausner, 1993). For instance, B12 had to reconcile with her offender as the best way of enduring the situation. She indicated:

> I did not want to retaliate against her because she was my senior nurse. I did not want to extend the problems.

Reconciliation is unnecessary for forgiveness in the workplace. In a few cases of decisional forgiveness victims (3 cases) showed that they cannot reconcile with their offender. For example in case A30 who was verbally abused by her colleague in a situation that was likely to cause physical harm even if she escaped from it. She reported:

> No, I'm still trying to avoid him but I think I have forgiven. I don't want to contact him.

Another case of being seriously harmed is A4 as she was treated verbally in a manner beneath her dignity by a younger colleague. She explained that:

> It is not necessary….It is really difficult to be the same. My action towards her is the same such as smiling and greeting but there is a greater distance.

Reasons why not to reconcile. Narrative from the case of B8 showed that she did not want to re-establish the relationship with her offender due to her judgement that the offender is not central to her life. She reported:

> She did not benefit nor had an influence on my life.

As well as in case A4, who gave two reasons why she cannot restore her trust with the younger colleague. The first is that the offender did not know that she had offended her colleague. She said:

> I mean she possibly did not know that she offended me. I have to adjust myself with a greater distance but I have to forgive her because I want to successfully finish my work. It's just work, not a personal life.

Another reason of A4 is that she was afraid that the offender will re-offend against her. She said:

> I'm afraid that re-offending will occur if I am as close to her as before. The more serious the offense, the greater the distance.

Meaning of Forgiveness

After the participants were interviewed about offensive events and the reasons why they forgave their offender, the researcher asked each interviewee to define forgiveness in their own terms. The themes included in the definitions of forgiveness emerged as represented in the categories, subcategories, and codes in table 4.2. However, the data suggested several definitions. The researcher has compared these with the definitions of forgiveness scholars and previous researchers. However, the researcher also found several distinctive meanings from our participants. From the qualitative analysis, there are five categories of forgiveness definitions: overcoming negative approaches towards the offender; abandonment of negative judgment; fostering of positive approaches and loving-kindness towards the offender: awareness of the benefits of forgiveness; and forgiveness as Buddhist beliefs. Details are shown in the following paragraphs.

Table 4.2

Categories, Subcategories and Codes of the Meaning of Forgiveness Derived from Respondent's Narratives, and Comparison with the Other Forgiveness Scholars and Researchers

Category and Code	f	Consistency with the other scholars & researchers
Overcome negative approaches towards offender		
- *Overcome negative Thoughts*		
Overcome negative thinking towards offender	6	McCullough et al. (2000); Aquino et al. (2003)
Do not retaliate	2	Enright & Coyle (1998); Wirthington (1998); Aquino et al. (2003)
Forget about the offense	1	
Do not ruminate	1	
- *Overcome negative emotions*		
Let go anger and grudge	16	Wirthington (1998); McCullough et al. (2000); Aquino et al. (2003)
Renounce negative emotions	1	Aquino et al. (2003)
Abandonment of negative judgment		
Seek to understand offender's reason	10	
Do not categorise as a wrongful act	8	
Accept offender's mistake	6	
Perspective thinking	4	
Abandon of negative judgment	3	Enright, Freedman, & Rique (1998)
Foster positive approaches & loving-kindness towards offender		
- *Foster positive thoughts*		
Foster positive thinking towards offender	11	McCullough et al. (2000)
- *Foster positive emotions*		
Empathy	4	Enright & Coyle (1998)
positive feeling	2	McCullough et al. (2000)
- *Foster positive acts*		
Continue to act in friendly manner	11	Wirthington (1998); Hargrave & Sell (1997); McCullough et al. (2000)
Awareness of the benefits of forgiveness		
Forgiveness leads to happiness	8	
Reciprocal forgiveness	2	
Think that anger (as opposite to forgiveness) is not useful	1	
Forgiveness as Buddhist beliefs		
Forgiveness is a higher-order merit of giving	2	
Forgiveness as a good Karma	1	

Note: f = frequency of code within the stories of thirty interviewees

Forgiveness is overcoming negative approaches towards the offender. The interviewees indicated that forgiveness was defined in term of overcoming their negative thoughts and emotions towards their transgressors. Forgiveness is an intra-individual process in which individual attempt to cut off or control their potential oppositional acts towards the offender. There are two subcategories found from the coding; overcoming negative thoughts, and overcoming negative emotions. Details are described in the following section below.

***Overcoming negative thoughts*.** Forgiveness is to let go the destructive thoughts towards their offenders. They thought that forgiveness was a reducing of their rumination or retaliation in order to facilitate or heal their feeling about the offensive events. Six participants said they thought that forgiveness was an overcoming of negative thinking towards their offenders. In case of B15, she said:

> I don't want to hold my negative thoughts, and it caused me to heal the hurt.

While A23 said that:

> Forgiveness is to stay calm and let the bad thoughts towards him be gone. Then I feel better.

In the case of B10, she said about forgiveness:

> Do not take this problem to my heart. My thinking is calm and normal. If I meet him again, my feeling would be calm and be without any negative attitude towards him.

Two participants indicated that forgiveness is not retaliating against their transgressors. B14 said:

> Forgiveness is to stop the wish to retaliate against her. Offending back will make it more serious.

As well as in the case of B12, she stated that:

> Forgiveness is that I don't want to oppose her. If we both oppose each other, it maybe becomes more serious.

Moreover, one interviewee, A4, implied that forgiveness involves not ruminating about the offensive event, while another participant, B16, claimed that forgiveness is to forget about the offense.

***Overcoming negative emotions*.** This definition infers that forgiveness involves the victim trying to decrease the negative emotions such as anger, resentment, grudge holding or dissatisfaction towards the offender. Nearly half of the participants indicated that forgiveness means letting go anger and grudges against their transgressors. For example, A21, said:

> Forgiveness is that I do not have a bad feeling or a grudge. I do not feel angry towards her.

Similar with case A7, she implied that:

> I forgave her. I was not angry or held a grudge towards her. When I walked past her, my face was not hot. I felt normal.

In case of B12, she stated about forgiveness that:

> Forgiveness means when I was provoked by someone and she made me feel angry, I have to not hold the grudge, do not be angry, and do not respond negatively with emotions.

Moreover, one respondent showed that forgiveness means to renounce the negative emotions. For example in case of B5, he implied that:

> Before I will forgive others, I have to suppress my bad emotions and gradually let it go.

Forgiveness is an abandonment of negative judgment. The interviewees indicated that forgiveness is a relinquishment of blame towards their offenders. The codes found from participants' forgiveness definitions in this category revealed interrelationships between codes describing the way to abandon the negative judgment. These codes comprise: seeking to understand the offender's reasons; accepting the offender's mistake; perspective taking; not categorising the offense as a wrongful act; and abandonment of negative judgment.

Firstly, one-third of participants indicated that seeking to understand the offender's reason was the meaning of forgiveness. The researcher organised this code into the abandonment of negative judgment category as it is the way used by participants to relinquish their blame towards the offenders. In case of A1, she stated:

> It is an acceptance of the reasons that we both had. Someone maybe causes us dissatisfaction. We should attempt to listen to the different reasons.

While, in case of B11, she said:

> If I had a conflict with him, I need to understand him. I think that when I work with others, it would be sometimes that I have the problems with others because we are not working in the same professions.

As well as A28, her definition was:

> Forgiveness means acceptance of others' acts. We cannot decide on what they should do or should not do in relation to our thinking. Each person has a different background such as family, developmental experiences, and character traits.

Secondly, six participants implied that forgiveness is an acceptance of the offender's mistake. For example, case A1 said:

> In general, everybody must make an error or mistake in their life.

Also, case A4, she stated:

> Our offender is just an ordinary person.

Similar to case of B17, she said that:

> Everybody can make mistakes. We, all of the people, do not intend to do wrong things. I understand that she maybe omitted to do something. Everyone has the chance to do wrong.

Furthermore, a few interviewees expressed that forgiveness is about the individual having to take the perspective of the offender. This code is quite similar to seeking to understand the offender's reason but this code is seems to be more about empathetic

thought where individuals try to stand in the offender's position such as in the case of A22, she said that:

> When I was dissatisfied or angry with others, I tried to think positively that she or he perhaps did not know my situation.

In case of A1, she claimed about forgiveness meaning that:

> Being open, accepting others' opinions, looking back at ourselves that if it had happened to me, what would I do?

Moreover, eight interviewees responded that they defined forgiveness as not categorising what the offenders had done to them as being wrongful acts. For example in case A3, she said:

> Do not mind as a wrongful act.

And also case B14, she defined that:

> Forgiveness is about not minding the offense.

As well as in case B8, She stated that:

> Forgiveness is the non-existence of the consequence of the wrongful act

Lastly, third participants gave the researcher a definition in terms of fully giving up negative blaming of the offender and abandoning negative judgment about them. In the case of B18, she said:

> It is a feeling of non judgment.

Also, case A20, she indicated:

> Forgiveness is giving a condonation.

Another case, A25, accepted that:

> Forgiveness is giving a condonation and not to judge.

Forgiveness is to foster positive approaches and loving-kindness towards the offender. Coding from the interviews showed that forgiveness is seen as the promotion or motivation among the victims to approach their offenders in more positive ways, that is to say, they offer loving-kindness towards their transgressors after being hurt. Three subcategories emerged from the interviewees: fostering positive thoughts; fostering positive emotions; and fostering positive acts, as in the following.

Fostering positive thoughts. This meaning refers to individuals encouraging themselves to think more constructively towards their offenders. Eleven cases defined forgiveness as being about positive thoughts. For instance, case A3, she said:

> Forgiveness is…positive thinking and optimism towards the offender.

Also in case A2, she stated that:

> At least, we also have good memories together. This offense is too small. Why should I ruminate over it? When trying to think on the good side, we would have a good feeling together.

Similar to case A27, she said:

> Forgiveness is changing my view from the bad side to the advantage side by thinking that no one has done the wrong thing.

Fostering positive emotions. In this definition, forgiveness is seen as being about the individual cherishing positive emotions towards his or her offender. Four cases described forgiveness in term of empathy. For example, case B11, she said:

> I have to empathise with him, be as if I were him.

Also A6 expressed that:

> Forgiveness is… I have to empathise with her so that I could know what she thinks.

As well as in case of B15, she stated that:

> Forgiveness is like when I love someone. I have to empathise with her. When I empathise or have good will towards her, I also then would get good will from her.

Furthermore, as well as empathy, forgiveness is seen as a general positive feeling , such asB14 who clarified that, in her definition, forgiveness means that she feels good with her offender. Another case, A19, showed the feeling of trust towards her offender:

> I do not think that she maybe will offend against me again or think badly of me. My bad feeling is gone, and I trust her.

Fostering positive acts. Forgiveness is defined as constructive behaviours towards the offender. Individuals promote their acts positively towards the transgressors after the relationships were damaged. In this definition, victims continue to behave in a friendly manner with their offenders. For instance, case B13, she gave the meaning of forgiveness as:

> Forgiveness is that I also act politely with him. I don't want to act badly with him due to I have to keep our images good. To be positive.

As well as case A2, she indicated that:

> Least of all, I should act in a good manner to everyone. They are our friends who live in the same world. We can interact as work colleagues, being friendly.

In the case of B14, she also showed the friendly act as forgiveness:

> I can give the goods or stuff to her. This action would bring her to understand that I am not angry with her. It is the same. It would solve the conflict inside her mind.

Forgiveness is the awareness of its benefits. The interviewees viewed that awareness of the benefits of forgiveness is part of its definition. Several participants foresaw the end result when they decided to forgive their offenders. Eight cases suggested that forgiveness leads to happiness. For example, case A7, she said:

> I thought in our life we have been faced with both happiness and suffering. I had to let it go. I felt sprightly and could concentrate better being happy.

Also, case A27 implied that:

> Forgiveness made me happy because my mind would disengage from the anger that affected my quality of life.

Another instance is case A28, she stated that:

> If we forgive, let our bad emotions go, and try to think of a good side, I would get the benefit as happiness. If I fully forgive her, my mind will be truly happy.

Moreover, two interviewees expressed that forgiveness involves reciprocity between two parties-victim and offender. They accepted that they forgave because they wanted their offender to learn to forgive them back such as A4, she said:

> Forgiveness is that I forgave her because I want her to consider forgiving me in return.

Another case is B9, she mentioned that:

> If I forgive him, he will forgive me back.

Furthermore, one participant, A2, described forgiveness in term of it facilitating her thinking that anger is not useful. She said:

> I think our life is not too long, anger and anger rumination towards someone until we die is not useful.

Forgiveness as Buddhist beliefs. When the researcher asked participants to define forgiveness, several did so according to their Buddhist beliefs. Responses from several interviewees represent the Buddhist concept in their utterances. Two participants view forgiveness as the higher-order merit of the principle of giving which, as taught by Buddha, encourage Buddhists to let go their revenge and, instead, to give the condonation towards the persons who hurt them (H.H. Somdet Phra Nyanasamvara, 2008). For example, case A29, she mentioned that:

> Forgiveness is the greatest wonderful gift.

As well as, A30, she defined:

Forgiveness is the worthiest merit.

Moreover, one interviewee, B8, defined forgiveness in the sense of Karma. Buddhists sees the world as fundamentally just, and this justice is maintained by Karma which is taught that good actions are rewarded with good result, and evil actions with bad result. Buddhist may believe that what he or she faced is a result from their own Karma, which is perhaps caused from his or her previous or present existence's action. She stated that:

> I think it was my destiny to be offended by her. In my previous life or past existence, I may had done a wrongful thing to her, so, in this present life, she maybe came to retaliate on me….However, I have to stay in the present and did not retaliate towards her because it maybe the cause for another Karma which would be attached to my next life.

Discussion

Though empirical research on forgiveness has grown in the psychological publications, but forgiveness in the workplace or organisational context is still under-investigated. More research is required to conceptualise the forgiveness process in order to understand individual's behaviours when dealing with conflict-resolution in work situations. This research used qualitative analysis to identify the concept of forgiveness from the nurse's experiences among their health-care teams as well as to understand their view about forgiveness as Thai laypersons that are influenced by Buddhism. The findings that emerged from this study provide several important insights. Three main insights are discussed below: process of forgiveness in a work context, definition of forgiveness, and Buddhist beliefs and values influencing the concept of forgiveness amongst Thais.

One of the contributions of the present study is the identification of a process model of forgiveness in the workplace as shown in figure 4.2. The model emerged from qualitative data and represents the ongoing process from offensive event to the resolutions of the respondents. This model illustrates how the work situation can lead to interpersonal conflict in daily working life; how individuals think, feel, and act as they experience offences; how they use cognitive reframing processes to find more peaceful ways of coping with their offender in order to facilitate their forgiving behaviour. In term of

cognitive-emotional disposition, result showed consistency with previous process models of forgiveness in that, after being offended, individuals are aware of possessing negative thoughts and emotions; through the forgiveness process, they attempt to reduce their negative rumination and emotions and replace them with more positive ways of being such as empathy, loving-kindness, and compassion (Malcolm & Greenberg, 2000; Enright & Coyle, 1998).

In order to encourage forgiveness, individuals use their thinking processes to understand the offensive situation and reframe their thoughts into more constructive ones. Enright and Coyle (1998) indicated the importance of the cognitive reframing process, what they called the work and deepening phase in their model. The Enright and Coyle stages are consistent with the re-attribution stage in this study. However, from the qualitative analysis, the researcher found differences in the sequence of this reframing stage and the forgiveness decision stage. The model of Enright and Coyle (1998) showed that individuals commit to forgive their offender, as a choice, before they reframe their thoughts; but in our findings, re-attribution of thoughts occurs before they decide to forgive their offenders. The differences in the timing of reframing-forgiveness stage may due to differences in methodology. While this was a qualitative study with individuals reporting their real work experiences of forgiveness, Enright and Coyle's model (1998) is derived from forgiveness intervention experiences. They separated the decisional forgiveness placing it in a decision phase and suggesting that full forgiveness or emotional forgiveness occurs later and results from the work and deepening phase. Thus the order is decisional forgiveness, reframing and deepening then emotional forgiveness will result. In this study the experience of the offence is followed by cognitive processing resulting in re-attribution and decisional and emotional forgiveness then follow. This research captured the forgiveness process based on the experiences of the participants and the distinction between decisional or emotional forgiveness was supported. The degree of negative emotions remaining towards the offender influenced With regard to the interesting details of forgiveness process, further discussion is provided as follows.

In the experiencing stage, our finding showed that, in the work context, verbal harm or harm to an individual's dignity from misunderstandings is the most commonly found cause of being offended. These offenses occur in their daily interactions among the healthcare team. This is supported by Yuthvoravit (2007) who found that most conflict

involving Thai nurses resulted from their communication and conflicts of interest. Moreover, the results showed that, after being offended, individuals' cognitive processes, as self-reflection, were engaged in order to understand the offensive event and to reduce their anxiety. Similarly, Williamson and Gonzales (2007) found in a study with 100 participants, that their cognitions after being offended involved trying to understand why the offender had harmed them?, and why them in particular? Furthermore, results found that the perception of being offended mostly resulted in the feeling of anger. In this study anger is the most common emotion found and this is consistent with Williamson and Gonzales (2007) observation that anger was the most frequent emotional response occurring after interpersonal harm. Our results are in accord with Williamson and Gonzales (2007) about the pattern of behaviour expressed in the conflict situation. Our nurses were almost female, and they displayed more non-oppositional behaviour-staying calm and using avoidance as did the females in Williamson and Gonzales (2007).

This study also provides crucial insights concerning the re-attribution stage. In order to forgive the offender, individuals need to reframe their negative ruminative thought into more constructive thoughts by seeking to understand and taking the perspective of the offenders and the offensive events. This re-attributional thought transforms the ruminations into more empathetic cognitions, emotions and behaviours, including forgiveness, towards the offenders (Enright & Coyle, 1998). Like Glaeser (2008) who found that understanding of the causal conditions of an offense proved to facilitate forgiveness and lead to individuals' empathising with transgressors. Moreover, finding show the importance of social factors which encourage reframing more positive thoughts. Social support seems to be the vital factor which provides informational and emotional support to individuals as they further decide to choose forgiveness as they wish or need to restore the relationship with the offender. This finding is consistent with Glaeser (2008) that seeking support was the facilitating factor in forgiveness after being offended. Furthermore, the researcher found that social pressure resulting from status differentials and norms in the workplace also play a role in reframing the victim's thoughts about the offensive events. This phenomenon reflects cultural factors in workgroup which dictates how individuals should as the norms require. The influence of Thai culture was apparent here with a requirement to forgive senior colleagues, to behave in ways that protected the reputation of their work group and that of more senior

colleagues and for senior colleagues to be more open and generous to younger colleagues. The specifically Buddhist influences are further exemplars of this cultural influence.

The findings also show two types of forgiveness, decisional and emotional forgiveness, as defined by Worthington (2003). Respondents showed that they decided to forgive their offending colleagues in term of controlling and letting go of their negative thoughts and feelings, but some of their negative emotions still remained; whereas emotional forgiveness or true forgiveness is where the positive emotions increase and replace the negative emotions toward their offender. However, the results show the portion of decisional forgiveness is greater than emotional forgiveness in our participants. But, interestingly, this indicator portrays that decisional forgiveness is necessary to reduce serious continual conflict and to maintain the working relationship in healthcare teamwork. The research literature suggests that emotional forgiveness takes time to occur completely and the conflicts reported in the study were all fairly recent (Worthington, 2006)

Our study also helps uncover the behaviour of victims after they decide to forgive their offenders. The participants reported that reconciliation is necessary in the work context after being offended. Like Worthington (1998), who presumed that forgiveness, though some of negative emotion may still remain, results in the victim and the offender restoring their relationship as completely as they can, bringing them back to neutral ground, and coming to rebuild good feelings to resume their relationship. Moreover, work conditions also pressurise victims to reconcile with their offenders. This factor reflects the collectivism in Thai work culture (Hofstede, 2001) which encourages victims to control negative oppositional acts and to maintain their positive manner with their offenders as the members of team expect.

Another important finding from this study is the definition of forgiveness that emerged from the respondents as the first empirical conceptualisation in Thai laypersons of forgiveness in a work context. The meaning of forgiveness's from this study can be categorised in five dimensions: overcoming negative approaches towards the offender; abandonment of negative judgment; fostering positive approaches and loving-kindness towards the offender; awareness of the benefits of forgiveness; and forgiveness as Buddhist beliefs, respectively. All of definitions refer to the meaning of the sense of

forgiveness as an intra-individual psychological phenomenon which focuses on oneself in order to respond to interpersonal conflict (McCullough et al., 2000). This finding also found respondents described forgiveness as the components of thought, emotion, and behaviour that they held towards their offenders. Three categories of definition, overcoming negative approaches towards the offender, abandonment of negative judgment, and fostering positive approaches and loving-kindness towards the offender are consistent with previous definition of forgiveness in the research literature (see reference in table 4.2). Forgiveness is seen as individual's readiness to overcome their negative thoughts and emotions, relinquish their negative judgments, and instead offer more positive views, feelings, and acts towards the wrongdoer.

However, two categories of definition were very different, awareness of the benefits of forgiveness and forgiveness as Buddhist beliefs. These findings demonstrate that participants view forgiveness as having a benefit or positive gain; that is to say, as a motivational concept, where individuals foresee or expect the positive valence of forgiveness as being the good choice for their working life, as it is a benefit resulting in happiness or improved quality of life. Buddhist concepts are contained within their sense of forgiveness. Buddhist utterance such as merit giving (called Dana in Pali), and Karma are found in their definitions of forgiveness. This is consistent with Rye et al. (2000) who suggest that religion influences the psychological process involved in forgiveness through victim's belief and practice in their own faiths

In all the wealth of themes arising from this finding, it is appeared that Buddhist beliefs influence victims' cognition and behaviours against the conflict situations. These beliefs contribute the amity conduct to Buddhist Thais in order to manage their life more peacefully and happily. The researcher found victims used Dhamma or Buddhist teaching to deal with their negative emotion, such as anger, revenge, dissatisfied, and hurt, towards their opponents like the concept of Buddhist anger management process (Mettabrahmavihara) which is used to practice the loving-kindness. These processes refer to the reflection of thought on the disadvantage of being a ruminative person, bad effect of anger, and instead offer more loving-kindness and compassion (Phra Brahmagunabhorn (P.A. Payutto), 2007). Moreover, Buddhist also influence to their thought about the justification of offensive events. The concept of Karma arose from the participants in order to rationalise why they did not retaliate and, instead, let the natural

just results to their offenders. Karma belief persuades individuals to think that offender will receive their own negative result naturally and retaliation will cause another evil Karma which will renounce the negative results back to them. This belief let victims feel that the opposed behaviour will result negatively and forgiveness will rather result positively among them.

Research Limitations in this study

Although our research contributes several important findings about forgiveness in the work context, there are limiting factors that should be considered in the future research. Firstly, the researcher asked the participants to give only one event of forgiveness experience due to time limitations during interview sessions. The data collected from each participant show a case where the process of forgiveness occurred. The researcher did not ask each participant to provide a case of unforgiveness. This can be examined further by looking at the obstacles to forgiveness within the analysis of each case. Moreover, although the researcher explored the necessity of reconciliation as a result of forgiveness, however, other behavioural outcomes of forgiveness in the context of the workplace such as cooperative behaviour, teamwork, team compliance, job satisfaction, and performance were not included in this study.

CHAPTER 5

MEASURING FORGIVENESS IN WORK RELATIONSHIPS: UNDERLYING STRUCTURE, REPLICABILITY, AND CONSTRUCT VALIDITY

Even although the theoretical concept and empirical basis of forgiveness have been investigated substantively since 1980s (McCullough, Pargament, & Thoresen, 2000); within the management and organisational literature, organization science has produced very little research on forgiveness within the workplace (Aquino & et al, 2003; Cameron & Caza, 2002). To understand forgiveness in the work context is a complex undertaking, and questions still remain for researchers to investigate (Madson, Gygi, Hammand, & Plowman, 2008). McCullough et al. (2000) mentioned that many aspects of forgiveness still cannot be examined empirically because the measuring scales have not yet been constructed in many socio-cultural contexts, such as work and organisational settings. This will be addressed in this study. Thus providing a psychometrically sound scale of forgiveness would facilitate research to increase our understanding of the role of forgiveness in workplace relationships.

In order to achieve a good quality scale to measure the forgiveness construct within the work context, the behavioural scientists should consider the forgiveness concept using knowledge derived from the work situation, plus theoretical points from other researchers and theorists and/or empirical evidence from layperson. From the first study (chapter 4), the qualitative results on Thai nurses as laypersons within the Thai work context, revealed five meanings of forgiveness: overcoming negative approaches, abandonment of negative judgment, fostering more positive approach, awareness of forgiveness benefits, and forgiveness as Buddhist beliefs. This was applied to this study as a conceptual background to produce the initial items of the forgiveness scale. Furthermore, the pool of items was quantitatively examined to determine the underlying factor structure by using exploratory factor analysis (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Costello & Osborne, 2005) and the internal replicability was investigated to indicate the invariance of the factors across the samples (Zientek & Thompson, 2007; Timmerman, Kiers, & Smilde, 2007). Finally, construct validation was employed to determine the convergent and nomological validity of the forgiveness construct using

other related constructs. (Cronbach & Meehl, 1955; Hair, Black, Babin, Anderson, & Tatham, 2006). Therefore, the forgiveness scale resulting from this study will be beneficial allowing further study of forgiveness in workplace relationships.

Construction of the Initial Scale of Forgiveness

Concept of Forgiveness within the Workplace

Forgiveness is a willingness to discard one's right to revenge and instead to show mercy to the offender (Enright & Coyle (1998). It is a motivation to reduce avoidance of the offender, as well as to abandon any anger, grudge holding, or revenge towards the offender, and conversely, to increase conciliation when the moral norms can be re-established (Worthington, 1998). McCullough et al. (2000) concluded that forgiveness is an intraindividual, prosocial change toward the offender that occurs within a specific interpersonal relationship.

In the organization context, there are several definitions of forgiveness revealed in the literature. Aquino et al. (2003) explained that interpersonal workplace forgiveness is a process where the individual, who was hurt by his or her colleague, attempts to overcome negative feelings, such as resentment and anger, toward the offender and to stop himself or herself from causing the offender harm even if he or she believes it is ethically justifiable to do so. While Aquino et al. (2003) focused on the individual level of the forgiveness process, Cameron and Caza (2002) defined forgiveness more broadly at an organisational level. They presumed that organisational forgiveness is the capacity to encourage collective abandonment of justified resentment, hurt, and blame. Moreover, it is the fostering of constructive, forward-looking ways in response to the broken relationships. This process requires a transformation and as a result the organization becomes more virtuous.

Furthermore, the construct of forgiveness that emerged from the first study (chapter 4) revealed that forgiveness is the individual's cognitive, affective, and behavioural responses towards the offender. With forgiveness, the individual attempts to overcome the negative approaches towards the offender, abandons negative judgment, fosters more positive approaches and loving-kindness towards the offender, and increases awareness of the benefits of forgiveness, and believes it is a good Buddhist practice.

There are five dimensions defining forgiveness resulting from the qualitative analysis among Thai nurse samples about their forgiveness in their workplace relationships, as follows:

1. Overcoming negative approaches towards the offender, individual attempts to cut off or control their potential oppositional acts towards the offender by overcoming negative thinking and emotions towards the offender.

2. Abandonment of negative judgment, individual seeks to understand the offender's reason, do not categorise the offensive as a wrongful act, accepts the offender's mistake, takes a perspective of the offender's view, and abandons negative judgment.

3. Fostering positive approaches and loving-kindness towards the offender, the individual promotes or motivates positive responses to the offender by fostering positive thinking, fostering positive emotions such as empathy and good feeling, and continues to act in a friendly manner towards the offender.

4. Awareness of the benefits of forgiveness, the individual is aware that forgiveness leads him/her to happiness and forgiveness would potentially lead to forgiveness in return from the offender.

5. Forgiveness as Buddhist beliefs, where the individual believes in Buddhist teaching that forgiveness is the higher-order merit of giving and is good Karma.

Characteristics of the Forgiveness Scale

McCullough et al. (2000, p.65-85) summarized the taxonomy for categorising the existent measures of forgiveness to 3x2x4 dimensions: a) level of specificity (offense-specific, dyadic, dispositional); b) direction (granting forgiveness, seeking forgiveness); and c) method (self-report, partner report, outside observer, measure of constructive or destructive behaviours). From his summary, the researcher found that most of the forgiveness scales existing in the literatures are self-rated offense-specific measures which intend to assess the extent to which a person has forgiven a single interpersonal transgression. Several scales of this type of measure were reported as good quality instruments in the previous academic literature, for example, Wade's Forgiveness Scale

(Wade, 1987), Transgression-related Interpersonal Motivation (TRIM) (McCullough, Rachel, Sandage, Worthington, Brown, & Hight, 1998), and Enright Forgiveness Inventory (EFI) (Subkoviak, Enright, Wu, Gassin, Freedman, Olsen, Sarinopoulos, 1995). In this vein, the researcher presumed that the empirical way to measure forgiveness within the situation of workplace relationships is to design an instrument which captures the specific interpersonal offense. Getting the raters themselves to report their thoughts, feelings, and behaviours towards the offenders would represent the circumscribed interpersonal forgiveness process accurately.

Items and rating scale. The pool of initial items was designed to measure forgiveness towards a specific offender within a specific work-related offense. A forty-item scale was designed based on the five dimensions of the forgiveness construct found from the first study which revealed forgiveness as the individual's cognitive, affective, and behavioural responses towards the offender. The scale instructed the respondents to choose the answer that best described their thoughts towards the person who has hurt or mistreated them in the past by using a Likert-type format with response possibilities ranging from 1(strongly disagree), 2 (disagree), 3(slightly disagree), 4(slightly agree), 5(agree), 6(strongly agree). Higher scores on this scale represent greater forgiveness towards an offender.

Content validity and proposed initial forgiveness scale. The three content experts chosen included a scholar in behavioural science research, another expert in industrial and organisation psychology, and a third expert in nursing science. The experts were briefed on the purpose of the forgiveness scale and were asked to provide feedback on the initial forgiveness scale. The criterias for item revision included: a) congruence with the relevant definition of the forgiveness construct from the first study, b) item clarity, c) relevance for the intended population of Thai nurses and the work setting. Feedback was considered and the scale was revised as shown in the table 5.1.

Table 5.1

Summary of Operational Definition and the Proposed Initial Forgiveness Scale.

Overcoming negative approaches towards the offender: individual attempts to cut off or control their potential oppositional acts towards the offender by overcoming negative thinking and emotions towards the offender.	
F1	Whenever I have a negative thought towards him/her, I try to stop it.
F2	I continue to think about how he/she had wronged me because he/she is a bad person.
F3	I no longer hold any grudge against him/her.
F4	I am constantly thinking about how to take revenge for how he/she had wronged me.
F5	I am trying my best not to think about how he/she had wronged me.
F6	I cannot stop thinking about how he/she had wronged me.
F7	I am still feeling resentful at having been mistreated by him/her.
F8	I can let go of my anger towards him/her.
F9	I feel angry every time I think about how he/she had wronged me.
F10	I feel upset every time I see him/her or even when I think about what had happened.
Abandonment of negative judgment: individual seeks to understand the offender's reason, do not categorise the offensive as a wrongful act, accepts the offender's mistake, takes the perspective of the offender, and abandons negative judgment.	
F11	I try to think about why he/she had wronged me.
F12	I attempt to understand the reason behind his/her actions.
F13	I no longer believe that what he/she had done to me is such a serious wrongful act.
F14	What he/she had done to me is unforgivable.
F15	I do not think that he/she intended to hurt me.
F16	I think he/she is just an ordinary person who is likely to make a mistake.
F17	I think he/she might have his/her own reasons for what he/she had done to me.
F18	I try to look back on the incident to see if I had done something to upset him/her first and that might be the reason why he/she wanted to hurt me back.
F19	I still judge what he/she had done to me is a wrongful act.
F20	I do not hold on what he/she had done to me is a wrongful thing.

Table 5.1 (continued)

Fostering positive approaches and loving-kindness towards the offender: individual promotes or motivates positive responses to the offender by fostering positive thinking, fostering positive emotions such as empathy and good feeling, and continues to act in a friendly manner towards the offender.

F21 I think he/she is a good person although he/she had hurt me in the past.

F22 I try to think about the time he/she has been good to me.

F23 I can see the good side of him/her.

F24 I think he/she is a very nasty person.

F25 He/she must have had some personal issues that made him/her act that way, and for that I feel sorry for him/her.

F26 I am compassionate towards him/her.

F27 Although he/she had hurt me before, I still have a good feeling towards him/her.

F28 I am now friendly to him/her

F29 If he/she needs help, I will not hesitate to offer my assistance.

F30 When I run into him/her, I try to act as if I did not see him/her.

Awareness of the benefits of forgiveness: individual is aware that forgiveness leads him/her to happiness and forgiveness would potentially result in the return of forgiveness from the offender.

F31 I think that forgiving what he/she had done to me makes me feel good.

F32 I think forgiving towards what he/she had done to me is not of benefit to me at all.

F33 I will clear my mind if I just forgive him/her.

F34 I think when I initiate forgiving him/her first, he/she will feel good towards me.

F35 He/she would not treat me any better even though I have forgiven him/her.

F36 It is not beneficial if I still remain unforgiving and hold a grudge against him/her.

Forgiveness as Buddhist beliefs: individual believes in Buddhist teaching that forgiveness is the higher-order merit of giving and is good Karma.

F37 I believe that forgiving towards him/her is a highest merit.

F38 I believe that the best giving is to forgive him/her for what he/she had done to me.

F39 I believe that by forgiving him/her, I would find wholesome things in my life.

F40 I believe that forgiveness is doing a merit to myself.

Method

Participants

The population for this study are full-time and professional nurses in Thailand. The sample was drawn by cluster random sampling from nurses who work in 168 hospitals located in Bangkok metropolitan and the surrounding area of around 100 kilometres. The researcher also attempted to collect data in various clusters of the operational units. Moreover, the adequate sample size was determined by using five times the number of scale items as suggested by Gorsuch (1983). In this study, the number of items in the initial scale is 40; as a result, the adequate number would be at least 200 participants. The researcher officially contacted the directors of the hospital for permission to collect data and the supervisors of the nursing departments to ask for their assistance. Packages of questionnaires were sent to the participants with an introductory covering letter. Finally, after four weeks of data collection, data was obtained from 348 nurses from three hospitals, constituting a good sample size.

As shown in table 5.2, the majority of participants were female (87.64%), and more than a quarter were between 25 and 29 years old (29.89%). The proportions of staff in the major levels of tenure groups were quite similar, with the group between 3 to 5 years having 23.85% and the group between 6 to 10 years being 22.99%. Participants had been working in surgery units (19.25%), general medicine units (17.43%), and inpatient service units (14.66%), respectively.

Furthermore, the preliminary analyses revealed the characteristics of the work-related offensive event (see table 5.2). The participants reported almost half of the offenders were their colleagues (49.43%), other professions (21.26%), doctors (12.64%), and their supervisors (8.05%), respectively. The majority causes of work-related conflict were role conflict (20.40%), misunderstanding (17.82%), injustice of workload (12.64%), performance error (10.92%), new in the task (9.48%), personal bias (7.76%), difference in profession and work status (5.75%), and other causes, such as the offender implying professional incompetence, miscommunication, offender's improper behaviour (8.91%), respectively.

Table 5.2

Summary of the Characteristics of the Participants and the Work-Related Offensive Events

Variables	Count	Percent
Characteristics of the participants		
Gender		
Female	305	87.64
Male	20	5.75
No response	23	6.61
Levels of age		
less than 25 years	67	19.25
25-29 years	104	29.89
30-35 years	86	24.71
36-40 years	35	10.06
41-49 years	20	5.75
more than 49 years	12	3.45
No response	24	6.90
Levels of tenure		
Less than 3 years	66	18.97
3-5 years	83	23.85
6-10 years	80	22.99
11-15 years	45	12.93
More than 15 years	43	12.36
No response	31	8.91
Operation units		
Surgery	67	19.25
General medicine	61	17.53
Inpatient service	51	14.66
Intensive care unit	28	8.05
Obstetrics and Gynecology	21	6.03
Outpatient service	17	4.89
Emergency	16	4.60
Psychiatry	14	4.02
Pedriatics	13	3.74
Health promotion	11	3.16
Eye, ear, nose, and throat (EENT)	9	2.59
Orthopedic	4	1.15
No response	36	10.34

Table 5.2 (continued)

Variables	Count	Percent
Characteristics of work-related offensive event		
Offender		
Nurse colleague	172	49.43
Other profession	74	21.26
Doctor	44	12.64
Supervisor	28	8.05
No response	30	8.62
Causes of being offended		
Role conflict	71	20.40
Offender's misunderstanding	62	17.82
Injustice of workload	44	12.64
Performance error	38	10.92
New in the job or task	33	9.48
Personal bias	27	7.76
Different in profession and work status	20	5.75
Others	31	8.91
No response	22	6.32

Measures

Measure for exploratory factor analysis. The initial 40 items of the forgiveness scale (table 5.1) were designed to measure forgiveness towards a specific offender within a specific work-related offense. The scale instructed the respondents to choose the answer that best described their thoughts, feelings, and actions towards the person who has hurt or mistreated them in the past by using a Likert-type format with response possibilities ranging from 1(*strongly disagree*) to 6(*strongly agree*). Higher scores on this scale represents greater forgiveness towards an offender.

Measures for Convergent validity analysis. Offense-specific forgiveness was measured by the Forgiveness Scale (Rye, Loiacono, Folck, Olszewski, Hiem, & Madia, 2001), the scale consists of 15 items with two subscales, absence of negative and the presence of positive. Participants were scored on a Likert-type scale with five rating scales from *strongly disagree* to *strongly agree*. Higher scores on this scale indicate a

greater level of forgiveness towards a specific offender. The Alpha coefficient for this scale in the present study was .829.

Dispositional forgiveness was measured by six items of the Heartland Forgiveness Scale (Yamhure-Thompson & Snyder, 2003). This scale intends to capture the likelihood of forgiving others. Items were rated on a 7-points Likert scale from *almost always false of me* to *almost always true to me*. Higher score on this scale indicate being more likely to forgive the other. The Alpha coefficient for this scale in the present study was .671.

State forgiveness was measured by an item developed by the researcher. The scale asked the participants to rate *"how much do you forgive the specific offender in your work relationship conflict"*. The item was rated from 1 (*I haven't forgiven at all*) to 5 (*I have completely forgiven*). Higher score on this item indicate a state of forgiveness towards the offender.

Measures for Nomological validity analysis. Willingness to reconcile was measured by two items of the Willingness to Reconcile Relationship Scale (Tomlinson, Dineen & Lewicki, 2004). These items were "*what is the likelihood that you would continue a relationship with him/her?*" and "*To what degree are you willing to let him/her try to reconcile the relationship with you?*." The participants used five Likert-type scales range from 1 (*least*) to 5 (*most*). Higher scores in this scale indicate strong willingness to reconcile with the offender. The Alpha coefficient for this scale in the present study was .862.

Rumination was measured with the Rumination About an Interpersonal Offense Scale (RIO) (Wade, Vogel, Liao, & Goleman, 2008). Six items were used to capture state or situation-specific rumination reflecting the repetitive cognitive rehearsal about the specific past transgression. Items were assessed by five Likert-type scales ranging from *strongly disagree* to *strongly agree*. Higher scores on this scale indicate strong mental attention on negative experience and outcome of the event. The Alpha coefficient for this scale in the present study was .884.

Seeking revenge was measured with the revenge subscale of Transgression-Related Interpersonal Motivations Inventory (McCullough, Rachel, Sandage, Worthington, Brown & Hight, 1998). Five items of the revenge subscale were rated using five Likert-type ratings ranging from *strongly disagree* to *strongly agree*. Higher scores on this scale indicate a higher degree to which the participant seeks to take revenge from his or her offender. The Alpha coefficient for this scale in the present study was .954.

Furthermore, two scales from the convergent validity tests were included in the model examining the nomological network of the forgiveness construct and its related variables. These were the forgiveness scale and dispositional forgiveness.

Data Analysis

To develop the measure of forgiveness in the workplace relationship, the researcher implemented various data analyses to assure that the forgiveness scale was psychometrically sound (see table 5.3). The initial items were collected and were submitted to exploratory factor analysis (EFA) using principal component analysis with Varimax rotation, to investigate the underlying factor structure of the forgiveness construct. Assessment of reliability via Cronbach's Alpha coefficient and composite reliability were examined. Two examinations of construct validity were implemented, convergent validity and nomological validity, indicating the theoretical related properties of the forgiveness construct derived from the scale development.

Table 5.3

Summary of the Data Analyses Conducted in This Study

Data Analyses	Methods	Statistical Packages
Exploratory factor analysis (EFA)		
Determining number of factor to retain	a) Eigenvalue greater than one rule (Guttman, 1954) b) Scree test (Cattel, 1966) c) Parallel Analysis (Horn, 1965)	a) SPSS b) MacParallel (Watkins, 2006)
Attaining the interpretable factors and items to retain	Principal component analysis (PCA) with varimax rotation method (Tabachnick & Fidell, 1996; Fabrigar et al., 1999)	SPSS
Bootstrapping the results from EFA		
Determining replicability of the number of factor to retain	Bootstrapped Eigenvalues (Zientek & Thompson, 2007)	SPSS (Syntax available on http://www.shsu.edu/~lrz002/BFA/index.html
Replicability of the PCA results	Bootstrap Procrustes Confidence Interval (Timmerman, Kiers, & Smilde, 2007)	MATLAB
Reliability Analyses		
Internal consistency	Cronbach's Alpha Analysis (Cronbach, 1951)	SPSS
Composite reliability	Raykov's Reliablity Analysis (Raykov, 1997)	AMOS
Replicability of composite reliability	Bootstrapped Bias-Corrected Percentile Confidence Interval (Fan, 2003)	AMOS
Construct Validation		
Convergent validity	Convergent validation (Campbell & Fiske, 1959)	SPSS
Replicability of convergent validity	Bootstrapped correlation coefficient and BCa confidence interval	SPSS
Nomological validity	Mediation model analysis (Frazier, Tix, & Barron, 2004)	AMOS
Replicability of nomological validity	Bootstrap method of mediation analysis (Mallinckrodt, Abraham, Wei, & Russel, 2006)	AMOS

Moreover, the APA Task Force on Statistical Inference (Wilkinson & APA Task Force, 1999) suggested that psychological and behavioural scientists should address the stability of their results by reporting the effect size and comparing the results with previous studies, avoiding idiosyncratic entities of the single study. However, evidence of replicability is usually absent from the research publications (Guthrie, 2001). Thompson (1996) mentioned:

> If science is the business of discovering replicable effects, because statistical significance tests do not evaluate result replicability, then researchers should use and report some strategies that do evaluate the replicability of their results. (p.29)

Scientists should seek the results that will generalise over all kinds of variation, comprising subjects, measurement, variables, time, and treatment or procedures (Thompson, 1994). There are two methods to investigate the replicability of the results, external and internal approaches (Thompson, 1996; Zientek & Thompson, 2007). External replicability concerns an accumulating of a new sample. This is the best or true replicability; however, most researchers do not pursue this method due to the limitations of time and resources needed to collect another sample. Another method, internal replicability concerns examining the available sampling results with one of three methods: cross validation which the data is split into two groups with equal number, the jackknife method which creates sample data sets from the data that drops out one data point at a time and conducting all possible analysis, or bootstrapping which creates sample sets from the data by random sampling with replacement (Thompson, 1994; 2004).

Bootstrapping is a useful and effective method for investigating the stability and replicability of results (Thompson, 1994; 1996; Guthrie, 2001). The Bootstrap method was developed by Efron and his colleagues (Efron, 1979; Diaconis & Efron, 1983), aiming to create an empirical sampling distribution to use for investigating statistical testing, standard error, and confidence interval. Thomson (1994) provided a simply explanation of this method:

> Conceptually, these methods involve copying the data set over again and again many times into an infinitely large “mega”data set. Thousands of different samples are then drawn from the “mega”file, and results are computed separately

> for each sample and then averaged. Alternatively, this resampling can also be described as “sampling with replacement”. (p. 166)

This method yields a condition where a participant from the original sample could be drawn more than once in a given resample or not at all. In each resample, the participants are chosen having the same number as the original sample (Guthrie, 2001). A result “informs the researcher regarding the extent to which results generalize across different types of subjects [samples]” (Thompson, 1994, p. 166).

The main advantage of bootstrapping is that it creates an “empirically estimated sampling distribution”, providing various statistics from each of the resamples for the parameter estimates of interest, standard errors, and confidence intervals (Guthrie, 2001; Zientek & Thompson, 2007). This avoids the requirement of large samples to determine sampling distributions for inferential testing in classic theory. In this study, bootstrapping could be used either for descriptive and inferential applications as mentioned by Zientek and Thompson (2007). For descriptive purposes, standard errors (*SEs*) from the empirically estimated sampling distribution were used to examine the replicability of parameter estimates over the samples, the small SEs indicate stability of the results across the samples. Confidence intervals offer a clearer understanding of the variability of the parameter estimates. For inferential purposes, estimates from the empirically estimated sampling distribution were used to find the critical ratio, behaving like a *t* statistic to test statistical significance. Confidence intervals also were considered in order to confirm whether estimates were excluded or included zero. Hence, in this study, all of the parameter estimates from the sample were examined the stability and replicability of the results, assuring the satisfactory psychometric properties of the forgiveness scale.

Results

The researcher presents the results of this study in two broad sections. Firstly, exploratory factor analysis with a principal component analysis of both the initial forty-items and the retained items will be shown followed by the bootstrapped examination of an invariance factor of the retained model. Second is the empirical testing of the psychometric properties of the forgiveness scale by providing reliability analysis, convergent validity and nomological validity. These psychometric properties also were examined via internal replicability by using bootstrapping. The results are shown as follows.

Exploratory Factor Analysis

The primary objective of exploratory factor analysis is to identify the latent factors which explain the covariation among a related group of measured items or variables (Costello & Osborne, 2005). In this study, an exploratory factor analysis with a Principal Component Analysis (PCA) with Varimax-rotation was achieved on the set of forgiveness scale's items. Principal component analysis enables the researcher to find the linear combinations the items that retain as much information about the initial measured items as possible (Fabrigar et al., 1999). To identify the number of factor retained and to examine the quality of the initial 40-items forgiveness scale, which contains similar items representing the forgiveness construct as developed from study 1, the researcher preferred the PCA method as it could reduce the amount of the items into a smaller number of factors, hence achieving more parsimonious variables to be explained (Kahn, 2006) and more reliable and interpretable factors (Tabachnick & Fidell, 1996).

Exploratory factor analysis of the initial 40-items of the forgiveness scale. Factorability of the correlation matrix was investigated regarding the appropriateness of factor analysis. Bartlett's (1954) test of sphericity was conducted to test the presence of the nonzero correlations. Result showed the chi-square was significant at the .0001 level (*Chi-square*=7507.98, *df*=780), therefore, the correlation matrix was not an identity matrix. Moreover, the measure of sampling adequacy (Kaiser, 1974) was achieved to quantify the degree of inter-correlation among the items. The value is reaching one when each item is perfectly predicted without error by the other items. The index of Kaiser-Mayer-Olkin measure of sampling adequacy was equal to .925, interpreted as an excellent

level of factorability (Hair, Anderson, Tatham, & Black, 1995). As a result the correlation matrix from the initial 40-items scale was appropriate for conducting factor analysis.

Several methods were employed to determine the number of factors retained, which include the eigenvalue greater than one rule (Guttman, 1954), scree test (Cattell 1966), and parallel analysis (Horn, 1965). In principal component analysis, the factor's eigenvalue was required to be equal or exceed the total variance for a variable because the factor would be meaningful if it explains more variance than a single variable does. Eight initial eigenvalues were greater than 1 (12.799, 3.401, 2.201, 1.908, 1.345, 1.277, 1.201, and 1.041), as shown in table 5.4. This results revealed the overfactoring problem of the rule of eigenvalue greater than 1 (Fabrigar et al., 1999). Stellefson, Hanik, Chaney, and Chaney (2009) cautioned the strict attention to this rule and required more substantive judgments to determine the number of factors to retain. Therefore, the researcher used the eigenvalue criterion in order to determine the maximum number of factors that should be retained. Additional strategies were implemented to identify how many factors to extract.

Table 5.4

Explained Variance for First Twelve Eigenvalues on the Initial 40-Items Scale

Factor	Eigenvalue	Percent of Variance	Cumulative Percent of Variance
1	12.799	31.998	31.998
2	3.401	8.502	40.500
3	2.201	5.501	46.002
4	1.908	4.769	50.770
5	1.345	3.363	54.133
6	1.277	3.193	57.326
7	1.201	3.001	60.327
8	1.041	2.603	62.930
9	.944	2.361	65.291
10	.895	2.238	67.529
11	.825	2.063	69.592
12	.799	1.999	71.590

Note. Extraction method: Principal component analysis.

The scree plot, which visually line graphs the results is conducted by plotting the factor numbers on X-axis and the eigenvalues on Y-axis, was investigated to ascertain the number of factors to retain. The point where the last eigenvalue drops substantially or forms a descending linear trend was determined. In figure 1, the solid line representing the sample eigenvalues tapers off after the fourth factor. This trend provided support for a four-factor solution for these data.

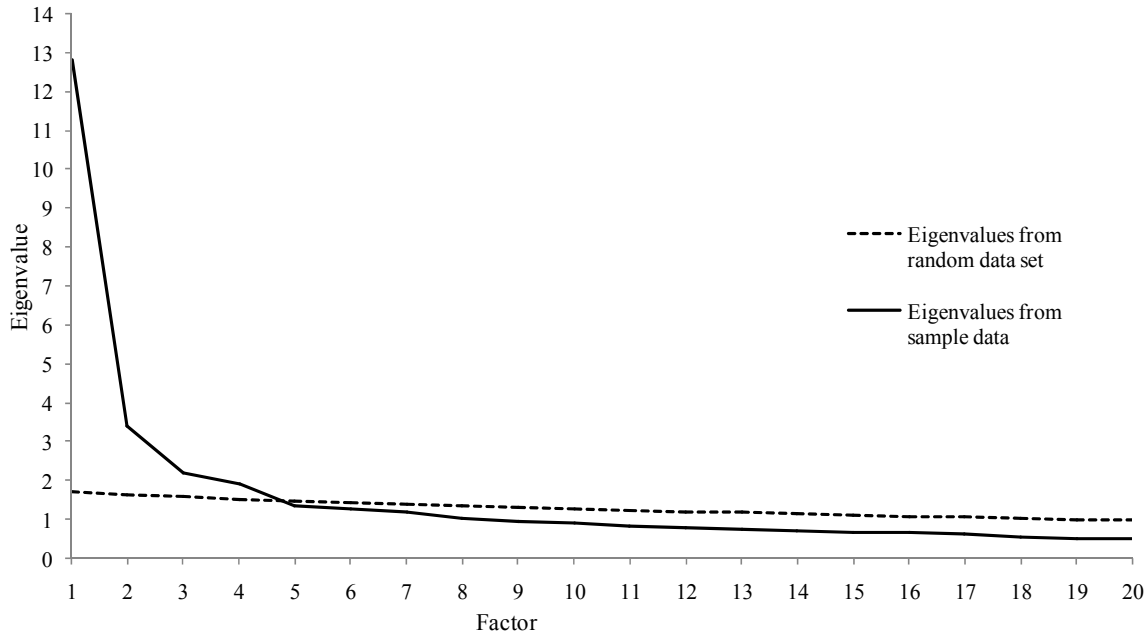

Figure 5.1. Eigenvalue plots from the sample and random data sets.

However, because the scree plot is criticised due to its subjectivity, parallel analysis (Horn, 1965) was conducted to provide a more objective criterion. Achieving this method, eigenvalues of a "random data set" were generated based on the same number of items and participants as in the real data matrix. Then the scree plot of eigenvalues from this random data was compared with the scree plot of eigenvalues from the sample data set. The point where the two plots meet identified the absolute maximum number of factors that would be retained. The reason behind this criterion is that the researcher should extract the factor from the sample data that explains more variance than the factor in the random data set (Reise, Waller, & Comrey, 2000). The researcher implemented

MacParallel (Watkins, 2006), a standalone program that runs on Macintosh, to compute the table of random data eigenvalues by filling in the number of 40 observed variables and 348 participants as being equal to the sample data. The programme generated the eigenvalues for a random data set that was compared with eigenvalues from sample's PCA, as shown in table 5.

Table 5.5

Parallel Analysis on the Initial 40-Items Scale

Factor	Eigenvalues from random data set	Eigenvalues from sample data set
1	1.731	**12.799**
2	1.6484	**3.401**
3	1.5797	**2.201**
4	1.5275	**1.908**
5	1.4786	1.345
6	1.4318	1.277
7	1.3894	1.201
8	1.3495	1.041
9	1.3112	.944
10	1.2783	.895
11	1.242	.825
12	1.2094	.799
13	1.1768	.744
14	1.1445	.704
15	1.1154	.677
16	1.0857	.663
17	1.0579	.614
18	1.0294	.571
19	1.0035	.528
20	0.9744	.520

Note. Sample eigenvalue larger than random eigenvalue are in bold.

A parallel analysis plot of 40 items (see figure 5.1) and table 5.5 showed the eigenvalues of the sample data were larger than the eigenvalues from the random data before the fifth factor. As a result, the researcher concluded that four factors should be retained for the initial 40-items of the forgiveness scale.

To attain the interpretable factors, the researcher applied Varimax rotation aiming to find the factor loadings which maximize the higher variance on their primary factors and are lower on the other factors (Tabachnick & Fidell, 1996). With regarding to the four factors extracted on the initial 40-items scale, the rotated factor loadings (see table 5.6) loaded thirteen items on factor 1, four items on factor 2, fourteen items on factor 3, and nine items on factor 4. The results showed several items aligned on the different factors and were incongruent with the concept of the initial item construction, such as F20 was loaded on Factor 1 and F35 was loaded on Factor3. To maintain both the statistical and substantial significance for the initial forgiveness scale development process, the problematic items would be eliminated by several criteria, which are, a) factor loading loaded on the primary factor should be equal or more than .30 (Fabrigar et al., 1999), b) there is no high cross-loading (factor loadings loaded on the other factor should not be more than .30) (Fabrigar et al., 1999), 3) the items loaded on the same factor should be similar regarding the theoretical concept. Due to the nature of multivariate analysis, after eliminating each item, the values of factor loadings would be changed. Therefore, the researcher had to be careful about each item being removed; subsequently each EFA was conducted until the criterions of factor interpretation were satisfied. After the seventeenth elimination of the irrelevant and poor items (see table 5.6), twenty three items retained as good interpreted items.

Table 5.6

Sample Factor Loadings on the Initial 40-Items of the Forgiveness Scale

Items	Factor				Communality	Retained	New item order
	1	2	3	4			
F10	***.761***	-.112	.260	.002	.660	Yes	f6
F7	***.747***	-.033	.225	.033	.611	Yes	f3
F9	***.737***	-.107	.163	-.040	.583	Yes	f5
F6	***.720***	-.088	.129	.103	.554	Yes	f2
F8	***.607***	.106	.165	.227	.458	Yes	f4
F4	***.563***	.113	.218	.265	.447	No	
F14	***.561***	.048	.386	.231	.519	No	
F5	***.533***	.293	.114	.213	.429	No	
F19	***.523***	.056	.491	.145	.539	No	
F3	***.520***	.038	.214	.215	.364	Yes	f1
F1	***.464***	.201	.057	.290	.344	No	
F20	***.432***	.205	.301	.142	.340	No	
F13	**.264**	.078	.222	.257	.192	No	
F18	.070	***.760***	-.051	.103	.595	Yes	f10
F12	.035	***.701***	.139	.193	.549	Yes	f8
F11	-.255	***.625***	.028	.020	.456	Yes	f7
F17	.196	***.536***	.208	.095	.378	Yes	f9
F29	.124	.056	***.784***	.256	.698	Yes	f17
F27	.243	.025	***.779***	.176	.698	Yes	f15
F28	.158	.006	***.755***	.317	.696	Yes	f16
F23	.252	.242	***.723***	.234	.700	Yes	f14
F30	.302	-.117	***.672***	.097	.565	Yes	f18
F21	.323	.306	***.588***	.230	.596	Yes	f13
F24	.445	.067	***.586***	.081	.552	No	
F34	.232	.121	***.531***	.506	.606	No	
F22	.157	.417	***.513***	.161	.488	No	
F15	.405	.254	***.500***	.001	.478	No	
F2	.291	.125	***.487***	-.067	.342	Yes	f11
F25	.187	.301	***.371***	.290	.347	No	
F16	.226	.281	***.368***	.240	.323	Yes	f12
F35	.027	-.243	**.276**	.015	.136	No	

Note. Factor loadings loaded in the primary factor are in bold, factor loadings larger than 3.0 are in bold and italicized, high cross-loading items are underlined.

Table 5.6 (continued)

Items	Factor				Communality	Retained	New item order
	1	2	3	4			
F38	.143	.107	.152	***.846***	.771	Yes	f21
F37	.059	.024	.119	***.820***	.691	Yes	f20
F39	.137	.182	.074	***.784***	.673	Yes	f22
F40	-.002	.109	-.079	***.756***	.589	Yes	f23
F33	.195	.066	.329	***.705***	.648	No	
F31	.204	.108	.355	***.696***	.663	No	
F36	.242	.223	.240	***.467***	.384	Yes	f19
F32	.271	-.154	.433	***.461***	.497	No	
F26	.081	.012	.263	***.278***	.153	No	

Note. Factor loadings loaded in the primary factor are in bold, factor loadings larger than 3.0 are in bold and italicized, high cross-loading items are underlined.

The first factor related to overcoming negative approaches towards the offender, which included F3, F6, F7, F8, F9, and F10. The second factor related to the abandonment of negative judgment. The four items retained were concerned with understanding the reasons and taking the perspective of the offender, which are F11, F12, F17, and F18. The third factor was related to fostering positive approaches towards the offender, which included F21, F23, F27, F28, F29, F30, F2, and F16. Even though the item F2 *"I continue to think about what he/she had wronged me because of he/she is a bad person (negative item)"* and F16 *"I think he/she is just an ordinary person who is likely to make a mistake"*, which did not initially belong to factor1 from the beginning of item development, were included in this factor. The researcher re-examined the content validity. These items were theoretical acceptable to be placed in the factor 3 as a cognitive component representing an attempt to foster positive approaches towards the offender. The fourth factor comprised both awareness of the benefits of forgiveness and forgiveness as a Buddhist belief, items included were F36, F37, F38, F39, and F40.

After each item was removed, another exploratory factor analysis was conducted on the retained 23-item forgiveness scale. This approach was a taken given that the eliminated items may influence the other estimated factor loadings. The retained scale was re-arranged so its items were ordered from f1 to f23 (see table 5.9).

Exploratory factor analysis of the retained 23-items of the forgiveness scale. Bartlett's test of sphericity showed the chi-square was significant at the .0001 level (Chi-square=3987.884, df=253) and the index of Kaiser-Mayer-Olkin measure of sampling adequacy was equal to .891, therefore the correlation matrix of 23-items on the forgiveness scales had a good factorability. The results revealed fourth initial eigenvalues were greater than 1 (7.368, 2.943, 1.884, and 1.595), as shown in table 5.7.

Table 5.7

Explained Variance for the First Ten Eigenvalues on the Retained 23-Items Scale

Factor	Eigenvalue	Percent of Variance	Cumulative Percent of Variance
1	7.368	32.035	32.035
2	2.943	12.794	44.829
3	1.884	8.191	53.020
4	1.595	6.935	59.955
5	.972	4.224	64.179
6	.869	3.780	67.960
7	.766	3.333	71.292
8	.649	2.821	74.113
9	.643	2.795	76.908
10	.629	2.734	79.643

Moreover, Parallel analysis was conducted to confirm the four factor model of the retained 23-items scale. The Scree plot of eigenvalues from the sample data was larger than the plot of eigenvalues from the random data within the four factors and dropped before the fifth factor (see figure 5.2 and table 5.8). These results indicated a dominant four-factor solution of the retained 23-items of the forgiveness scale, with factor1, 2, 3,

and 4 explaining 32.035, 12.794, 8.191, and 6.935 percent of variance, respectively. The four factors accounted for 59.955 percent of the variance in the forgiveness scale.

Table 5.8

Parallel Analysis on the Retained 23-Items Scale

Factor	Eigenvalues from random data set	Eigenvalues from sample data set
1	1.5004	**7.368**
2	1.4172	**2.943**
3	1.3519	**1.884**
4	1.2975	**1.595**
5	1.249	.972
6	1.2047	.869
7	1.165	.766
8	1.1242	.649
9	1.0844	.643
10	1.0486	.629

Note. Sample eigenvalues larger than random eigenvalues are in bold.

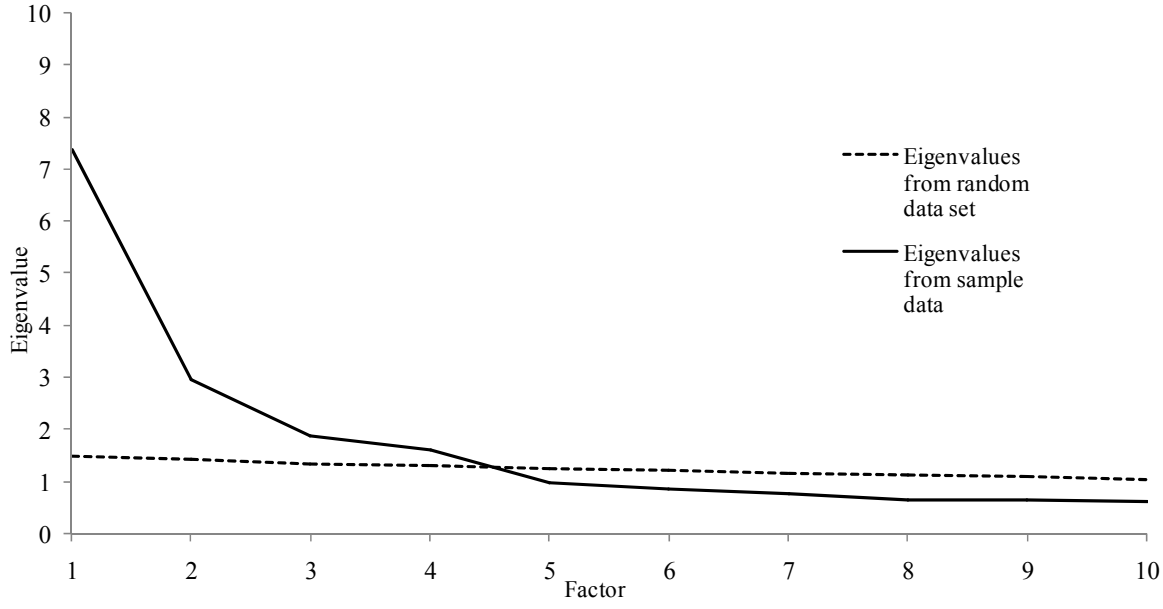

Figure 5.2. Eigenvalue plots from sample and random data sets on the 23-item scale.

Table 5.9 presents the variables linked to factor 1 and named as Overcoming Negative Thought and Feeling towards the Offender (6 variables labelled as f1 to f6), variables linked to factor 2 and identified as Seeking to Understanding the Offender's Reasons (4 variables labelled as f7 to f10), variables linked to factor 3 and named as Fostering Positive Approaches towards the Offender (8 variables labelled as f11 to f18), and variables linked to factor 4 and identified as Belief in the Benefits of Forgiveness (5 variables labelled as f19 to f23).

Table 5.9

Sample Factor Loadings on the Retained 23-Items of the Forgiveness Scale

Items	Factor				Commu-nality
	1	2	3	4	
f1) I no longer hold any grudge against him/her.	***.516***	.081	.279	.165	.378
f2) I cannot stop thinking about how he/she had wronged me.(-)	***.759***	-.015	.118	.093	.599
f3) I am still feeling resentful at having been mistreated by him/her.(-)	***.797***	.033	.229	.023	.690
f4) I can let go of my anger towards him/her.	***.600***	.111	.232	.208	.469
f5) I feel angry every time I think about how he/she had wronged me.(-)	***.779***	-.063	.156	-.008	.635
f6) I feel upset every time I see him/her or even when I think about what had happened. (-)	***.784***	-.069	.273	.028	.694
f7) I try to think about why he/she had wronged me.	-.279	***.694***	.042	-.014	.561
f8) I attempt to understand the reason behind his/her actions.	-.023	***.730***	.187	.173	.599
f9) I think he/she might have his/her own reasons for what he/she had done to me.	.256	***.580***	.154	.092	.434
f10) I try to look back on the incident to see if I had done something to upset him/her first and that might be the reason why he/she wanted to hurt me back.	.033	***.766***	-.048	.140	.610

Table 5.9 (continued)

Items	Factor				Commu-nality
	1	2	3	4	
f11) I continue to think about how he/she had wronged me because he/she is a bad person.(-)	.286	.181	***.447***	-.070	.319
f12) I think he/she is just an ordinary person who is likely to make a mistake.	.203	.269	***.363***	.279	.323
f13) I think he/she is a good person although he/she had hurt me in the past.	.292	.268	***.629***	.228	.605
f14) I can see the good side of him/her.	.233	.217	***.746***	.196	.697
f15) Although he/she had hurt me before, I still have a good feeling towards him/her.	.261	.039	***.817***	.091	.745
f16) I am now friendly to him/her.	.140	.017	***.832***	.211	.757
f17) If he/she needs help, I will not hesitate to offer my assistance.	.092	.038	***.857***	.171	.773
f18) When I run into him/her, I try to act as if I did not see him/her.(-)	.293	-.080	***.668***	.059	.542
f19) It is not beneficial if I still remain unforgiving and hold a grudge against him/her.	.224	.252	.289	***.479***	.426
f20) I believe that forgiving towards him/her is a highest merit.	.054	.000	.172	***.843***	.743
f21) I believe that the best giving is to forgive him/her for what he/she had done to me.	.114	.089	.237	***.849***	.797
f22) I believe that by forgiving him/her, I would find wholesome things in my life.	.112	.164	.144	***.814***	.723
f23) I believe that forgiveness is doing a merit to myself.	-.022	.092	-.030	***.812***	.669

Note.(-) indicates a negative item, factor loadings larger than 3.0 are in bold and italicized, Overcoming Negative Thought and Feeling towards the Offender (f1 to f6), Seeking to Understand the Offender's Reasons (f7 to f10), Fostering Positive Approaches towards the Offender (f11 to f18), and Belief in the Benefits of Forgiveness (f19 to f23).

Bootstrapping the Results from Exploratory Factor Analysis

Bootstrapping is an effective statistical method for examining the stability and replicability of the results (Guthrie, 2001). Several researchers proposed bootstrap methods to confirm the results from factor analysis (Raykov & Little, 1999; Zientek, 2006; Timmerman, Kiers, & Smilde, 2007; Zientek and Thompson, 2007). Zientek and Thopmson (2007) conducted the nonparametric approach of bootstrapping, named bootstrap factor analysis, to investigate invariance of factors and internal replicability of principal component analysis results. Thousands of resamples were drawn with replacement, and each resample was the same sample size as the original data set. This 1000 bootstrapping is required to generate the empirically estimated sampling distribution (Efron, 1979), from which parameter estimates were produced for the bootstrapped eigenvalues and the Procrustes-rotation pattern/structures. Standard errors of the bootstrapped eigenvalues and factor loadings were then used to examine both inferential and descriptive results (Zientek, 2006; Zientek & Thompson, 2007). In this study, the researcher aimed to investigate the replicability of the number of factors and whether the bootstrapped result yielded the four factors in the model of the forgiveness construct. Hence, bootstrapped eigenvalue employed by Zientek and Thompson (2007) was conducted. This method could be used solely for assuring the correct number of factors to retain.

Furthermore, the replicability of factor loadings were investigated by using confidence interval (CIs) derived from bootstrapping. The researcher conducted an approach proposed by Timmerman, Kiers and Smilde (2007) where the bootstrap method was conducted on various types of confidence intervals aimed to examine the qualities of the principal component loadings. In their empirical example, the bootstrap bias-corrected and accelerated (BCa) Procrustes confidence interval offered CIs for the factor loading with reasonable coverage properties. Using CIs from the bootstrapping provided confirmatory results on the stability of the factor loadings representing satisfactory replicability.

Bootstrapped eigenvalues. Using a thousand resamples of bootstrapping, the researcher generated the mean eigenvalues for each factor and created a distribution resulting in the standard deviations being the estimated standard error of the eigenvalues

(Thompson, 1996). Consequently, the estimates can determine whether the mean of bootstrapped eigenvalues is greater than 1 and whether the SEs of mean bootstrapped eigenvalues are large or small (Zientek and Thompson, 2007). Bootstrapped SEs provide the researcher with the concept of stability of the eigenvalues over a thousand times of resampling (Guthrie, 2001), representing the internal replicability of the number of factors to retain (see table 5.10).

Table 5.10

Eigenvalues from Sample and Bootstrap Results Across 1000 Resamples

Factor	Sample Eigen-value	Mean bootstrap results (M(BR))	Standard error (SE)	Range		95% Percentile Confidence Interval	
				Min	Max	Lower	Upper
1	7.368	7.429	.434	6.27	9.03	6.606	8.323
2	2.943	2.990	.205	2.38	3.64	2.602	3.386
3	1.884	1.982	.181	1.50	2.67	1.661	2.379
4	1.595	1.589	.123	1.25	1.99	1.369	1.852
5	.972	1.047	.073	.86	1.40	.917	1.196
6	.869	.906	.055	.73	1.12	.803	1.030
7	.766	.800	.044	.66	.95	.718	.888
8	.649	.721	.040	.61	.86	.647	.801
9	.643	.660	.035	.56	.77	.595	.729
10	.629	.610	.033	.51	.72	.547	.675
11	.593	.561	.031	.47	.67	.497	.624
12	.570	.516	.029	.42	.61	.460	.576
13	.495	.468	.028	.38	.57	.416	.521
14	.459	.423	.026	.34	.53	.375	.479
15	.407	.382	.024	.31	.47	.339	.433
16	.387	.345	.021	.28	.41	.306	.391
17	.332	.311	.020	.25	.38	.273	.352
18	.317	.280	.019	.22	.35	.246	.318
19	.270	.249	.019	.18	.32	.213	.288
20	.253	.221	.017	.16	.28	.187	.255
21	.209	.193	.015	.15	.24	.164	.224
22	.198	.171	.015	.13	.22	.143	.199
23	.192	.148	.016	.09	.19	.117	.180

Plots of the empirically estimated sampling distributions for the eigenvalues are presented in figure 5.3. To describe the replicability of estimates, mean bootstrapped eigenvalues and the sample eigenvalues were relatively close with small standard errors, then sample eigenvalues could be considered as stable, and they were likely to replicate (Guthrie, 2001). The first eigenvalue was 7.429, ranging from 6.27 to 9.03 (95% CIs 6.606-8.323). The second eigenvalue was 2.990, ranging from 2.38 to 3.64 (95% CIs 2.602-3.386). The third eigenvalue was 1.982, ranging from 1.50 to 2.67 (95% CIs 1.661-2.379). The fourth eigenvalue was 1.589, ranging from 1.25 to 1.99 (95% CIs 1.369-1.825).

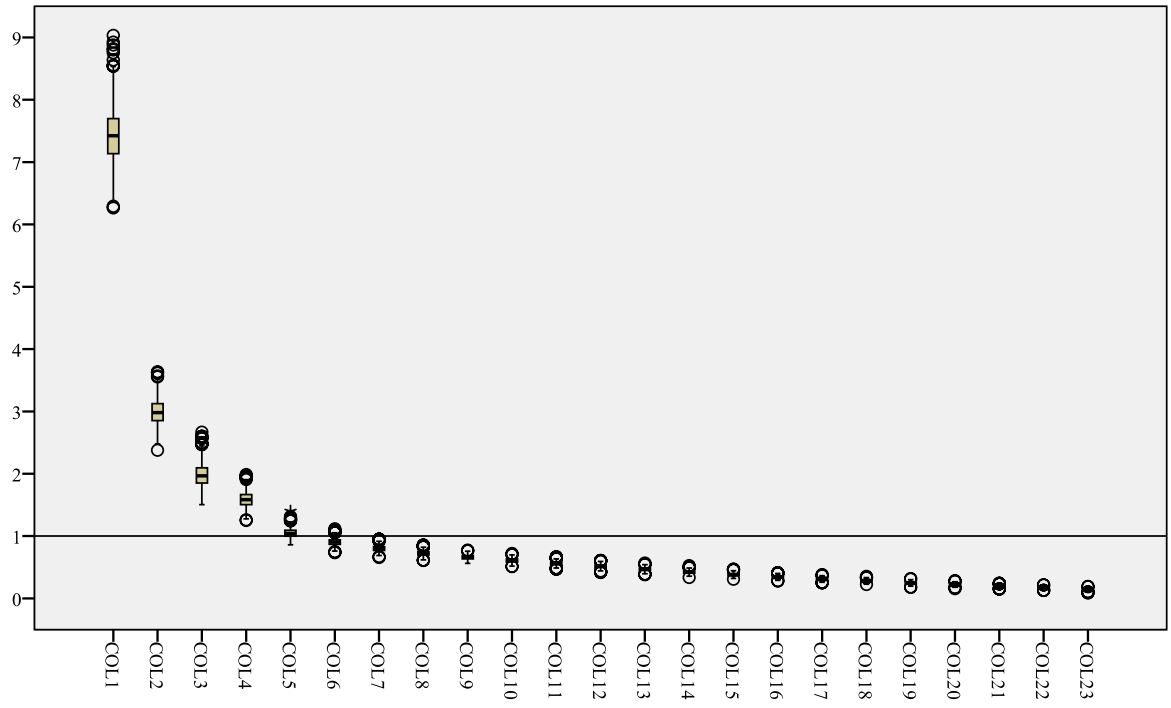

Figure 5.3. Empirically estimated sampling distribution of the 23 eigenvalues.

Of particular notice was the ambiguous result from the fifth eigenvalue. The sample estimate showed the fifth eigenvalue was lower than 1 (0.972) but the mean bootstrapped estimate was 1.047, this sign could be unclear in order to determine the number of factors to retain. Dealing with this problem, Zientek (2006) preferred the range of estimates facilitating the decision on factor extraction. The fifth eigenvalue ranged

from .86 to 1.40. Of the 1000 resampling results, 23.80 percent of the fifth eigenvalue were smaller than one. Moreover, 95% percentile confidence interval was .917 to 1.96 indicating the lower level of confidence interval was less than 1. Therefore, the researcher was not confident with the fifth factor and could conclude that the four factor model of forgiveness was more stable. Consequently, the bootstrap findings confirmed the results from EFA, representing the good replicability of the four factor model of the 23-items of forgiveness scale.

Bootstrapped Factor Loadings. Procrustes rotation of factor loading matrix was implemented to obtain CIs for loadings in factor analysis, generalizing the sample results across samples (Raykov & Little, 1999; Zientek, 2006; Zientek & Thompson, 2007; Timmerman et al., 2007). This solution was achieved to correct the problems of variation across factors as mention by Thompson (1995) that:

> The bootstrap must be applied such that each of the hundreds or thousands of resampling results are all located in a common factor space before the mean, SD, skewness and kurtosis are computed…If the analyst computed mean structure (or pattern) coefficients for the first variable on the first component across all the repeated samplings, the mean would be a nonsensical mess representing an average of some apples, some oranges, and perhaps some kiwi. The sampled solutions must be rotated to best fit positions with a common target solution, prior to computing means and other statistics across the samples, so that the results are reasonable. (pp. 88-89)

Zientek and Thompson (2007) mentioned that any other rotation solutions except the Procrustes solution may show incorrect results. Moreover, Timmerman et al. (2007) stated the optimal interpretability of Procrustes approach using target matrix in order to conduct the bootstrapping on the component loading resulted in better CIs performance.

For the present study, the target matrix was created, as a prior given loading matrix, from the sample factor loading matrix of 23-items (see table 5.9). The researcher followed the approach obtaining bootstrap procrustes confidence interval from Timmerman et al. (2007). A thousand resamplings was achieved by MATLAB program. Each bootstrap loading matrix was rotated using orthogonal Procrustes rotation (Cliff, 1966) with fixed four components. This method presumes that each sample loading

matrix is rotated to optimal interpretability. Results from 1000 bootstrappings achieved an empirically estimated distribution, where CIs were estimated (see table 5.11). The coverage of bootstrap CIs on sample factor loading determined the stability of the sample estimates across the samples.

Table 5.11

Factor Loadings from Sample and Bootstrap across 1,000 Resamples

Items	Factor 1		Factor 2		Factor 3		Factor 4	
	Sample loading	Bootstrap Proc. CI	Sample loading	Bootstrap Proc. CI	Sample loading	Bootstrap Proc. CI	Sample loading	Bootstrap Proc. CI
f1	**.516**	**[.30, .65]**	.081	[-.17, .26]	.279	[.12, .44]	.165	[.02, .29]
f2	**.759**	**[.69, .82]**	-.015	[-.14, .11]	.118	[.01, .23]	.093	[-.01, .23]
f3	**.797**	**[.75, .85]**	.033	[-.07, .13]	.229	[.12, .31]	.023	[-.07, .12]
f4	**.600**	**[.46, .69]**	.111	[-.03, .27]	.232	[.09, .38]	.208	[.08, .35]
f5	**.779**	**[.72, .83]**	-.063	[-.22, .05]	.156	[.02, .27]	-.008	[-.10, .08]
f6	**.784**	**[.72, .83]**	-.069	[-.18, .03]	.273	[.16, .37]	.028	[-.05, .17]
f7	-.279	[-.41, -.14]	**.694**	**[.58, .77]**	.042	[-.10, .35]	-.014	[-.12, .11]
f8	-.023	[-.15, .09]	**.730**	**[.52, .80]**	.187	[.06, .38]	.173	[.07, .30]
f9	.256	[.11, .37]	**.580**	**[.41, .69]**	.154	[-.02, .35]	.092	[-.04, .22]
f10	.033	[-.09, .16]	**.766**	**[.71, .83]**	-.048	-.17, .08]	.140	[.03, .24]
f11	.286	[.11, .42]	.181	[.02, .36]	**.447**	**[.31, .56]**	-.070	[-.19, .05]
f12	.203	[.03, .35]	.269	[.06, .47]	**.363**	**[.30, .53]**	.279	[.12, .42]
f13	.292	[.19, .40]	.268	[.13, .40]	**.629**	**[.50, .72]**	.228	[.13, 34]
f14	.233	[.14, .33]	.217	[.11, .37]	**.746**	**[.65, .80]**	.196	[.10, .30]
f15	.261	[.14, .34]	.039	[-.11, .13]	**.817**	**[.76, .86]**	.091	[.01, .17]
f16	.140	[.05, .24]	.017	[-.11, .11]	**.832**	**[.79, .87]**	.211	[.12, .29]
f17	.092	[-.01, .18]	.038	[-.09, .13]	**.857**	**[.81, .89]**	.171	[.08, .26]
f18	.293	[.18, .43]	-.080	[-.19, .09]	**.668**	**[.55, .75]**	.059	[-.06, .17]
f19	.224	[.10, .37]	.252	[.07, .45]	.289	[.15, .42]	**.479**	**[.30, .61]**
f20	.054	[-.02, .12]	.000	[-.12, .01]	.172	[.07, .28]	**.843**	**[.79, .88]**
f21	.114	[.03, .19]	.089	[-.00, .20]	.237	[.15, .34]	**.849**	**[.78, .89]**
f22	.112	[.02, .20]	.164	[.06, .28]	.144	[.04, .24]	**.814**	**[.75, .86]**
f23	-.022	[-.13, .07]	.092	[-.01, .20]	-.030	[-.16, .07]	**.812**	**[.72, .87]**

Note. Bootstrap Proc. CI is 95% BC_a Procrustes Confidence Interval, factor loadings loaded on primary factor are in bold.

Results revealed all of the sample's factor loadings were covered by the corresponding lower and upper ends of 95 percent BCa Procrustes confidence intervals, and the lower CIs of bootstrapped factor loadings are all over .30, indicating replicability

and stability of the results of interpreted items from the sample EFA. Moreover, with the four factors structure, bootstrapped 95% confidence interval for the proportion of explained variance ranged from .558 to .619, covering the explained variance from the sample (.599). As a result, the researcher concluded that the 23 items of the forgiveness scale would be stable if a new sample was obtained, yielding good internal replicability of the scale.

Reliability

The reliability coefficient has become a significant statistic aimed to reflex the consistency of measurement (Raykov, 2002). According to Feldt and Brennan (1989), "Reliability is a property of the scores on a test for a particular population of examinees". Providing the reliability index helps further researchers to interpret the size of observed effects (Wilkinson & APA Task Force, 1999), facilitating a meta-analysis work, or analysis of generalization of the measure. One of the most often used estimators of reliability is internal consistency, Cronbach's Alpha coefficient (α; Cronbach, 1951). Alpha is a function of internal consistency, represents interrelatedness of the items (Cortina, 1993). It is a conservative evaluation of internal consistency which Alpha determined as a lower bound of reliability (Kline, 2005).

The correlations between the items and their total composite scores, Corrected Item-Total Correlations, were larger than .30, providing empirical evidence that all the 23 items were measuring the same construct. Items linked to Overcoming Negative Thought and Feeling towards the Offender ranged from .502 to .726, items linked to Seeking to Understand the Offender's Reasons ranged from .350 to .572, items linked to Fostering Positive Approaches towards the Offender ranged from .436 to .755, and items linked to Belief in the Benefits of Forgiveness ranged from .478 to .795.

The internal consistency of Alpha reliability coefficient for the overall forgiveness scale was .888, for Overcoming Negative Thought and Feeling towards the Offender was .850, for Seeking to Understand the Offender's Reasons was .680, for Fostering Positive Approaches towards the Offender was .874, and for Belief in the Benefits of Forgiveness was .854. Three quarters of the factors yielded good properties of Alpha reliability coefficient, factor1, factor3, and factor4. Factor 2 Seeking to Understand the Offender's

Reason was lower than .70, nevertheless, it was seemed as the satisfactory level of reliability (α between .60 -.70) as mentioned by Aiken (2000).

Table 5.12

Corrected Item-Total Correlation, Cronbach's Alpha, Sample and Bootstrap Composite Reliability of Forgiveness Scale

Items	Internal Consistency		Composite Reliability		
	Corrected Item-Total Correlation	Cronbach's Alpha (α)	Sample Raykov's Reliability (ρ)	Bootstrapped 95% Bias-Corrected Percentile Confidence Interval for ρ	
				Lower	Upper
Factor 1: Overcoming Negative Thought and Feeling towards the Offender		.850	.856	.823	.882
f1	.502				
f2	.637				
f3	.726				
f4	.562				
f5	.660				
f6	.716				
Factor 2: Seeking to Understand the Offender's Reasons		.680	.692	.607	.762
f7	.462				
f8	.572				
f9	.350				
f10	.499				

Table 5.12 (continued)

Items	Internal Consistency		Composite Reliability		
	Corrected Item-Total Correlation	Cronbach's Alpha (α)	Sample Raykov's Reliability (ρ)	Bootstrapped 95% Bias-Corrected Percentile Confidence Interval for ρ	
				Lower	Upper
Factor 3: Fostering Positive Approaches towards the Offender		.874	.876	.846	.901
f11	.443				
f12	.436				
f13	.687				
f14	.752				
f15	.755				
f16	.747				
f17	.748				
f18	.594				
Factor 4: Belief in the Benefits of Forgiveness		.854	.857	.814	.889
f19	.478				
f20	.736				
f21	.795				
f22	.730				
f23	.635				
Overall Forgiveness Scale		.888	.914	.893	.931

However, Alpha coefficient analysis, which is based on tau-equivalent measurement model, requires that basic assumptions should be met to estimate the true reliability accurately (Raykov, 1997). These assumptions, for example, are that the items measure the same underlying factor with the same measurement unit, and factor coefficients should be loaded equally. Violation of the basic assumptions causes Alpha

coefficient to be far from the true reliability of the data. Raykov (2004b) mentioned that with uncorrelated errors of measurement, Alpha is a lower bound of composite reliability, and with correlated errors, Alpha can be either an underestimate or overestimate of composite reliability. Alternative methods are consequently desirable to evaluate the reliability (Raykov, 2004a).

From the development of the structural equation modeling approach, Raykov (1997) proposed the SEM approach for measurement of reliability analysis to provide a more precise reliability estimate for a composite score being made up of congeneric measures. With this method, the researchers could generate approximate standard error and confidence interval for scale reliability with the Bootstrap method (Raykov, 1998). Gu, Little, and Kingston (2009) recommended the researchers should report the Alpha coefficient coupled with this SEM method providing more substantive results.

Fan (2003) demonstrated Raykov's reliability analysis using AMOS. To present the reliability analysis with this method, an example of factor 1 "Overcoming Negative Thought and Feeling towards the Offender" was provided. Factor 1 consisted of eight items, and the researcher was interested in the composite score reliability estimate. The model in Figure 5.4 shows the SEM for estimating reliability for the composite consisting of the congeneric measures (f1 to f6). The correlation between two latent factors, Fa (an auxiliary variable, representing "observed score") and ON (representing the true score of factor1), is the reliability index ($\sqrt{\rho_{xx}}$), which is not the reliability coefficient. To obtain the estimated reliability coefficient, the reliability index was squared by multiplying the value of reliability index by itself. By implementing AMOS, the researcher drew the path diagram (figure 5.4) and selected several options from the "Output" tab. In AMOS "Analysis Properties", the option of "Standard Estimates" and "All Implied Moments" were selected providing the correlation between ON and Fa, which behaves as the reliability index for the composite consisting f1 to f6. In the "Bootstrap" options, the researcher selected 2000 bootstrap samples with 95% confidence intervals. Thus, AMOS provided the sample reliability coefficient and bootstrapped confidence intervals, providing the stability of reliability across 2000 resamplings.

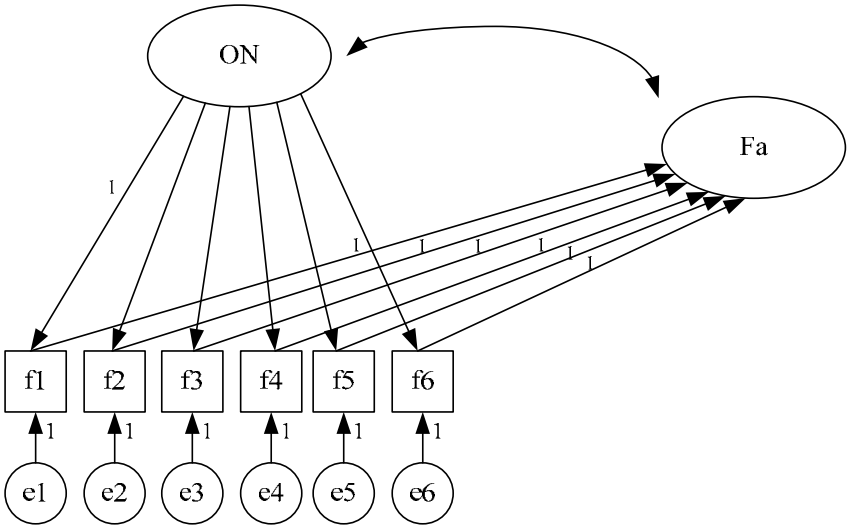

Figure 5.4. Example SEM model analysing Raykov's reliability of factor 1 Overcoming Negative Thought and Feeling towards the Offender. AMOS graphical analysis model was recommended by Fan, X. (2003), Educational and Psychological Measurement, 63, p.39.

Results from Raykov's reliability coefficient analysis yielded a satisfactory level of the scale's reliability, confirming the reliability from the Alpha coefficients. For Overcoming Negative Thought and Feeling towards the Offender it was .856, for Seeking to Understand the Offender's Reasons it was .692, for Fostering Positive Approaches towards the Offender it was .876, for Belief in the Benefits of Forgiveness it was .857, and for the overall forgiveness scale it was .888.

The 2.5th and 97.5th percentiles of the distribution of the 2000 bootstrap reliability estimates were taken as lower and upper bounds of an approximate interval estimate of scale reliability, generating the 95% confidence interval. The 95% CI of Overcoming Negative Thought and Feeling towards the Offender (.823 to .882), Fostering Positive Approaches towards the Offender (.846 to .901), Belief in the Benefits of Forgiveness (.814 to .889) were determined as a good level of reliability. The 95% CI of Seeking to Understand the Offender's Reasons (.607 to .762) was ranging in an acceptable level reliability (Aiken, 2003). Moreover, the 95% CI of overall forgiveness scale yielded a good level of reliability (.893 to .931). The narrowness of the bootstrapped confidence interval, differences between the lower and upper bounds, suggested that the

scale reliability coefficients on the forgiveness scale were likely to be stable, representing good replicability of the results.

Construct Validity

Construct Validity of a scale refers to the extent to which the scale measures a particular construct or psychological concept (Aiken, 2000). Cronbach and Meehl (1955) popularized the term of construct validity calling psychological scientists to determine "what psychological construct account for test performance". To Examining construct validity requires a complex process, determining a variety of evidence to assess the extent to which scores on quantitative scales reveal respondent's standing on the construct of interest (Hoyt, Warbasse, & Chu, 2006). Several methods were employed in the previous literature to reveal the construct validity of a scale such as testing the factor structure, expert's judgment on the construct of interest, correlates of test score and other variables which are expected to have a certain relationship with the concept of interest (Aiken, 2000; Hoyt, Warbasse, & Chu, 2006).

Campbell and Fiske (1959) suggested evidence of convergent validation should be employed to reveal construct validity. When the score on the given scale correlates moderately or highly with score on the theoretically concerned construct, this identifies as convergent validity. In the scale development process, it is important to demonstrate convergent validity of a measure with other instruments that have known properties (Cronbach & Meehl, 1955; Anastasi, 1988). Thus providing the evidence of positive correlation between a score measured by the forgiveness scale and scores measured by the other standard forgiveness scales would reveal the convergent validity property of the forgiveness scale.

Moreover, Cronbach and Meehl (1955) mentioned the term *"Nomological network"* in order to examine construct validity of the variables of interest. The scientists have to achieve a nomological network linkage between the construct intended to be validated and other variables, which have been proven theoretically to be related. This term can be called "Nomological Validity", as present in Viswanathan (2005) and Hair et al. (2006) refer to the structural relationship model of the specified construct and related variables. Hence, in the present study, the researcher intended to provide the evidence of

construct validity by examining the structural path model of the forgiveness construct with other related constructs.

Convergent Validity. The researcher would like to answer the question that *"Do the 23-items of the forgiveness scale correlate or converge with other standard measures of the forgiveness construct?"* To assess this validity, the researcher created the mean of the composite score of 23-items representing the forgiveness scale. This score is then expected to be positively correlated with three other forgiveness measures, specific-offensive forgiveness (Rye et al., 2001), dispositional forgiveness (Yamhure-Thompson & Snyder, 2003), and the single item of State forgiveness.

Table 5.13

Correlations of Forgiveness Scale with Specific-Offensive Forgiveness, Dispositional Forgiveness, and State Forgiveness

	1	2	3	4
1. Forgiveness scale	1			
2. Specific-offensive forgiveness (Rye et al., 2001)	.640** [.569, .705] (.036)	1		
3. Dispositional forgiveness (Yamhure-Thompson & Snyder, 2003	.630** [.554, .698] (.038)	.641** [.580, .694] (.028)	1	
4. State forgiveness	.560** [.471, .643] (.043)	.557** [.479, .628] (.037)	.493** [.479, .628] (.044)	1

Note. **p<.01, empirically estimates of standard errors are in the round brackets, lower and upper bound of BCa 95% confidence interval across 2,000 bootstrapping are in the square brackets.

Results revealed satisfactory evidence of convergent validity for the forgiveness scale (see table 5.13). Scores from the forgiveness scale were positively associated with specific-offensive forgiveness (r=.640, p<.01), indicating that participants rating

themselves highly on the forgiveness scale developed in this study tend to forgive on the specific-offensive scale as well. The Forgiveness scale was positively associated with dispositional forgiveness (r=.630, p<.01), indicating that the person who has a high score on this scale is likely to forgive others in general. The Forgiveness scale was positively correlated with state forgiveness (r=.560, p<.01), indicating that persons who have a high score on the forgiveness scale tend to rate higher on their decision to forgive their offender within their specific work relationship conflict. Moreover, in the results from the bootstrapping across 2,000 resamples, all the empirically estimates of standard error were small (ranged from .028 to .044) and the BC_a 95% confidence interval analysis yielded the moderate positive correlations between the forgiveness scale and specific-offensive forgiveness (.569, .705), for the forgiveness scale and dispositional forgiveness (.554, .698), and for the forgiveness scale and state forgiveness (.471, .628). These bootstrap results revealed the stability of convergent validity of the forgiveness scale across the samples.

Nomological Validity. The researcher would like to answer the *question "Does the forgiveness construct behave in a theoretically expected way?"* Two mediation models were proposed to examine the theoretical network of the forgiveness construct and other psychological constructs. The first hypothesis of interest was that forgiveness would be a significance mediator of the relationship between dispositional forgiveness and willingness to reconcile (see figure 5.5) and the second hypothesis of interest was that forgiveness would be a significant mediator of the relationship between rumination and seeking to revenge (see figure 5.6).

The first mediation model hypothesised that dispositional forgiveness would be positively associated with forgiveness for the specific-offensive event (Wade & Worthington, 2003; Koutsos, Wertheim, & Kornblum , 2008) and the increase of forgiveness would then contribute to a willingness to reconcile with the offender (Aquino et al., 2003). The researcher conducted the mediation analysis following the steps suggested by Frazier, Tix, and Barron (2004), conducting three regression analyses. In the first analysis, willingness to reconcile was regressed on dispositional forgiveness achieving the coefficient corresponding to Path *c* in figure 5A. Unstandardised coefficients shown in Figure 5.5, with corresponding standardised coefficients in round brackets. The unstandardised regression coefficients of path *c* was .355 (p<.01) is also

shown in the table 5.14. The second step was that forgiveness, as the mediator variable, was regressed on dispositional forgiveness to obtain the regression coefficient for Path *a* in Figure 5B. The unstandardised regression coefficients for Path *b was* .429 (p<.01). In the third step, willingness to reconcile was regressed simultaneously on both forgiveness and dispositional forgiveness. This analysis provided the unstandardised regression coefficients for Path *b* and *Path c'*. These were .693 (p<.01) and .057, respectively. The unstandardised regression coefficients were divided by the standard error yielding a *Z* statistic that could be used for statistical significance in the Normal Theory approach (Frazier et al., 2004). Results shown Path *a*, *b*, and *c* were satisfied, critical ratio values were 15.32, 8.66 and 7.10, respectively. However, the regression coefficient of *c'* was relatively small and did not reach significance due to the critical ratio was 1.05.

To examine the indirect effect of dispositional forgiveness on willingness to reconcile, the unstandardised regression coefficient of *a* was multiplied by *b* resulting *a x b* was .297 and the standard error of *a x b* was calculated followed by Baron and Kenny (1986) using $\sqrt{a^2sb^2 + b^2sa^2 + sa^2sb^2}$, where *sa* was the standard error of *a* and *sb* was the standard error of *b*. Using this formula, standard error of *a x b* was .039. The critical ratio of *a x b* was 7.62 indicating the statistical significance and representing that the mediation had occurred. On the basis of this method, the researcher concluded that the indirect effect of dispositional forgiveness on willingness to reconcile was mediated by forgiveness.

Finally, to investigate the mediator role of forgiveness, the regression coefficient of *c* and *c'* were compared (Frazier et al., 2004). The relation between dispositional forgiveness and willingness to reconcile (*c'*) did not differ from zero, or was not significant, after forgiveness was included in the model (see figure 5.5). This result yielded the fully mediating role of forgiveness on the relationship between dispositional forgiveness and willingness to reconcile.

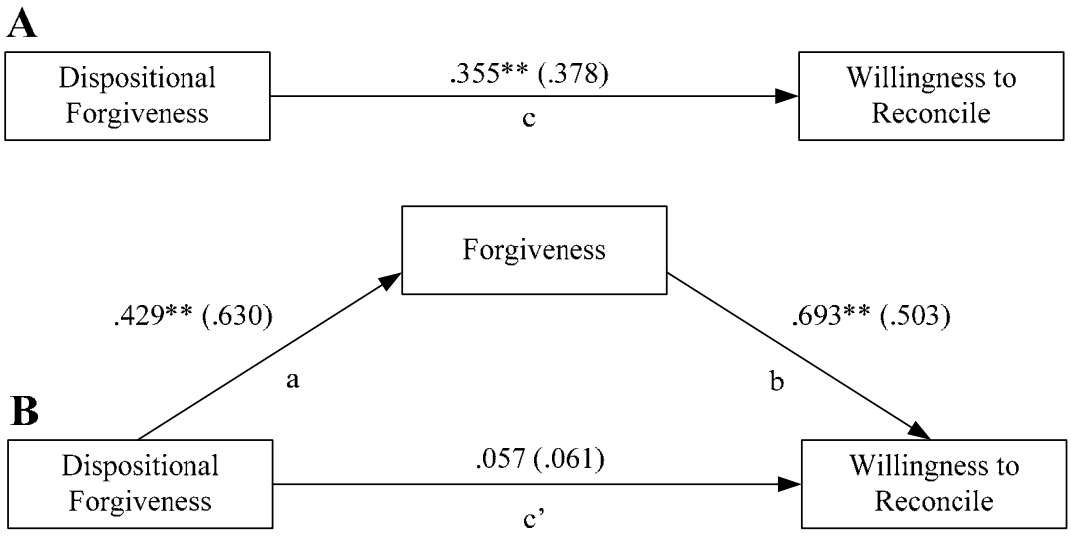

Figure 5.5. A Mediation model with forgiveness as a mediator between dispositional forgiveness and willingness to reconcile. A: The direct effect model for dispositional forgiveness and willingness to reconcile. B: The mediation model with forgiveness as mediator. Unstandardised coefficients are shown, with corresponding standardized coefficients in round brackets. $^{**}p<.01$.

In order to examine the internal replicability of the sample results, the researcher conducted the bootstrap method of mediation analysis described by Mallinckrodt, Abraham, Wei, and Russel (2006), using AMOS program. The mediation model was drawn in the graphical interface similar to Figure 5.5, including error terms for the forgiveness and willingness to reconcile. The bootstrap option was selected requesting 2,000 resamples with BCa 95% percentile confidence interval. The researcher also requested bootstrap estimates of indirect, direct, and total effects from the Output submenu. The result shown that the means of bootstrapped estimates ($\bar{B}$) slightly differed from the sample estimates (see table 5.14). The means standard error of estimates based on 2,000 empirical samples were relatively small. The means of estimate (and means of standard error) of the bootstrapping were $\hat{a}$ = .428 (.032), $\hat{b}$ = .693 (.101), $\hat{c}$ = .354 (.050), and $\hat{c}'$= .057 (.070). The bootstrap 95% confidence interval in table 5.14 excluded zero for *a*, *b*, and *c*, achieving statistically significance by conventional standards (Shrout & Bolger, 2002).

The 95% confidence interval for *a x b* ranged from .199 and .396, indicating that the indirect effect was occurring. The 95% confidence interval of *c'* was around -.070 to .202 with the range of CI including zero, showing forgiveness played a fully mediating role in the relationship between dispositional forgiveness and willingness to reconcile. Results from the bootstrapping supported the stability of the mediation analysis results across the samples.

Table 5.14

Testing Mediation Model with Forgiveness as a Mediator between Dispositional Forgiveness and Willingness to Reconcile

Path/effect	Sample Regression result		Bootstrap estimate		Bootstrap BCa 95% Confidence interval	
	B	*SE*	$\bar{B}$	$\overline{SE}$	Lower	Upper
c (Dfg → Reconcile)	.355** (.378)	.050	.354 (.378)	.050	.256	.449
a (Dfg → Fg)	.429** (.630)	.028	.428 (.629)	.032	.363	.490
b (Fg → Reconcile)	.693** (.503)	.080	.693 (.502)	.101	.491	.882
c'	.057 (.061)	.054	.057 (.061)	.070	-.070	.202
a x b	.297** (.317)	.039	.297 (.316)	.049	.199	.396

Note. Standardised estimates are in the round brackets, Dfg = Dispositional forgiveness, Reconcile = Willingness to reconcile, Fg = Forgiveness (as measured by the forgiveness scale in this study), **p < .01.

Investigating the second nomological network of the forgiveness construct, the researcher hypothesised that rumination would be negatively related to forgiveness for the specific-offensive event (Greenberg, 1995; McCullough, Bono, & Root, 2007; Burnette, Davis, Green, Worthington, & Bradfield, 2009) and that it is this lack of forgiveness that contributes to the intention to seek to take revenge on the offender (McCullough, Bellah, Kilpatrick, & Johnson, 2001). A mediation model with forgiveness as a mediator between rumination and seeking revenge was tested (see figure 5.6). In the first analysis, seeking revenge was regressed on rumination achieving the coefficient corresponding to Path *c*. The unstandardised regression coefficient of path *c* was .668 (p<.01), as shown in the table 5.15. The second step was that forgiveness, as the mediator variable, was regressed

on rumination to obtain the unstandardised regression coefficient for Path *a,* which was -.280 (p<.01) in Figure 6B. In the third step, seeking revenge was regressed simultaneously on both forgiveness and rumination. This analysis provided the unstandardised regression coefficients for Path *b* and *c'*. These were -.537 (p<.01) and .518 (p<.01), respectively. The unstandardised regression coefficients were divided by the standard error yielding a *Z* statistic that could be used for statistical significance. Results shown Path *a*, *b*, *c*, *c'* were satisfied, critical ratio values were -7.36, -8.52, 13.36, and 10.79, respectively.

To examine the indirect effect of rumination on seeking revenge, the unstandardised regression coefficient of *a* was multiplied by *b*. The unstandardised regression coefficient of *a x b* was .150 and the standard error of *a x b* was .027. The critical ratio of *a x b* was 5.56 indicating statistical significance and representing that the mediation had occurred. On the basis of this method, the researcher concluded that the indirect effect of rumination on seeking revenge was mediated by forgiveness.

Finally, to investigate the mediator role of forgiveness, the regression coefficient of *c* and *c'* were compared (Frazier et al., 2004). The relation between rumination and seeking revenge (*c'*) was smaller with statistical significance at .01 level, after forgiveness was included in the model (see figure 5.6). This result yielded the partial mediator role of forgiveness on the relationship between rumination and seeking revenge.

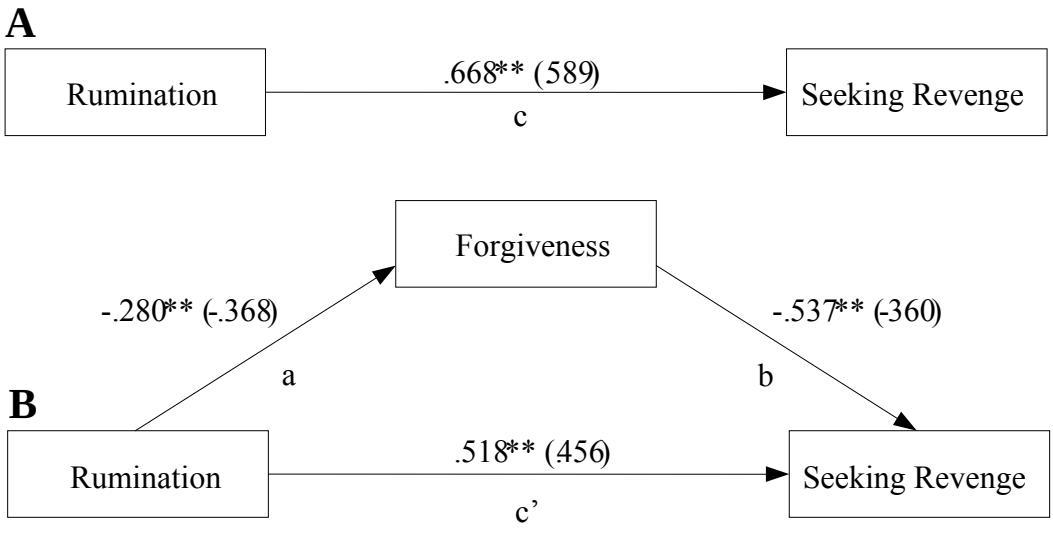

Figure 5.6. A Mediation model with forgiveness as a mediator between rumination and seeking revenge. A: The direct effect model for rumination and seeking revenge. B: The mediation model with forgiveness as mediator. Unstandardised coefficients are shown, with corresponding standardized coefficients in round brackets. **p<.01.

Bootstrapping the second mediation model was drawn in the graphical interface similar to Figure 5.6, including error terms for the forgiveness and seeking revenge. The results show that the means of the bootstrapped estimates ($\bar{B}$) slightly differed from the sample estimates (see table 5.15). The means standard error of the estimates based on 2,000 empirical samples were relatively small. The means of the estimate (and means of standard error) of the bootstrapping were $\hat{a}$ = -.280 (.047), $\hat{b}$ = -.533 (.090), $\hat{c}$ = .669 (.06), and $\hat{c}'$= .521 (.067). The bootstrap 95% confidence interval in table 14 excluded zero for *a*, *b*, *c*, and c' achieving the statistical significance by conventional standards (Shrout and Bolger, 2002).

The 95% confidence interval for *a x b* ranged from .099 and .222, indicating that the indirect effect was occurring. The 95% confidence interval of *c'* was around .385 to .647 which excluded zero, showing forgiveness played a partial mediating role in the relationship between rumination and seeking revenge. Results from the bootstrapping yielded the stability of mediation analysis results across the samples.

Table 5.15

Testing Mediation Model with Forgiveness as a Mediator between Rumination and Seeking Revenge

Path/effect	Sample Regression result		Bootstrap estimate		Bootstrap BCa 95% Confidence interval	
	B	*SE*	$\bar{B}$	$\overline{SE}$	Lower	Upper
c (Rumi → Revenge)	.668** (.589)	.050	.669 (.590)	.060	.544	.779
a (Rumi → Fg)	-.280** (-.368)	.038	-.280 (-.368)	.047	-.370	-.187
b (Fg → Revenge)	-.537** (-.360)	.063	-.533 (-.357)	.090	-.715	-.365
c'	.518** (.456)	.048	.521 (.459)	.067	.385	.647
a x b	.150** (.132)	.027	.149 (.131)	.035	.099	.222

Note. Standardised estimates are in the round brackets, Rumi = Rumination, Revenge = Seeking revenge, Fg = Forgiveness (as measured by the forgiveness scale in this study), **p < .01.

In conclusion, results from two mediation analysis yielded empirical evidence representing the good nomological validity of the scale. Using both with the convergent validity evidence and nomological validity evidence, the researcher could be confident that the forgiveness construct measured by the 23-items of the forgiveness scale developed in this study satisfactorily and achieved construct validity. Moreover, results from the bootstrapping also showed internal replicability thus assuring the stability of the results across the samples.

Discussion

Achieving the psychometrically sound scale designed to measure forgiveness in workplace relationships will provide the means to address further research regarding forgiveness within the work context. A four-factor underlying structure of forgiveness emerged from an exploratory factor analysis as representing the forgiveness construct empirically identified by Nurses, as Thai layperson within the work situation. There are overcoming negative thought and feeling towards the offender, seeking to understand the offender's reasons, fostering positive approaches towards the offender, and belief in the benefits of forgiveness. This finding confirms the definition of forgiveness that emerged from the first study where forgiveness is seen as an individuals' readiness to overcome their negative thoughts and emotions, attempting to relinquish their negative judgment, and instead offering more positive views, feelings, and acts towards the offender.

The first factor, overcoming negative thought and feeling towards the offender is consistent with the concept as described in the previous conceptual literatures (Enright & Coyle, 1998; Worthington, 1998; McCullough et al., 2000; Aquino et al., 2003) that when individuals forgive the persons who hurt them, they try to overcome their destructive thought and let go of their negative feeling such as resentment, anger, hostility towards the offenders. Another factor, fostering positive approaches towards the offender is also consistent with the concepts from the previous academic literature (Hargrave & Sell, 1997; Enright & Coyle, 1998; Worthington, 1998; McCullough et al., 2000) which infer that forgiveness is a prosocial change in one's view, feeling, and action towards an offending relationship partner. The individual offers more positive thought and feeling, empathy, and continues to act in a friendly manner with their offender. Furthermore, the factor identified as seeking to understand the offender's reasons is consistent with step within the work phase of forgiveness mentioned by Enright, Freedman, and Rique (1998). After being hurt, individuals attempt to understand the offender's reasons such as their personal issues and present pressures. This factor is an instrumental dimension of forgiveness, which relinquishes their blame towards the offender.

The final factor, belief in the benefits of forgiveness is the combination of awareness of the benefits of forgiveness and forgiveness as Buddhist beliefs, as found in the first study. This factor is seen to be salient representing both the prosocial motivation

of forgiveness as suggested by McCullough, Worthington, & Rachal (1997) and the influence of Buddhist involvement on the forgiveness concept among the participants (Rye, Pargament, Ali, Beck, Doff, Hallisey, Narayanan, & William, 2000). It demonstrates that individuals foresee the positive consequences of forgiveness as being a good choice dealing with their relationships, and it is consistent with Buddhist beliefs that are taught about individuals forgiving others as doing a good merit or Karma (Phra Brahmagunabhorn (P.A. Payutto), 2007).

In studying construct validity, the researcher found satisfactory evidence of the convergent and nomological validity of the 23-items of the forgiveness scale. Evidence for convergent validity, was that the forgiveness scale correlated with two standard forgiveness scales, specific-offensive forgiveness (Rye et al., 2001) and dispositional forgiveness (Yamhure-Thompson & Snyder, 2003). This provides initial evidence of the convergent property of the forgiveness scale with the other two psychometrically sound instruments on the forgiveness construct. Moreover, the forgiveness scale also moderately correlated with a single item of state forgiveness representing the consistency between the score on multi-items measure of forgiveness and specific decision on forgiveness towards the offender, yielding similar results to those found by McCullough et al. (1998).

Evidence from nomological validity reveals the theoretical network of the forgiveness construct. Specific offensive forgiveness, as measured by the 23-items scale, was positively related to dispositional forgiveness being consistent with the findings from Wade and Worthington (2003), and Koutsos et al. (2008). Moreover, it was positively correlated with willingness to reconcile. This result confirms the concept of forgiveness and its consequences in the workplace as suggested by Aquino et al. (2003) that increasing forgiveness would contribute to an ongoing work related relationship. The fully mediating role of specific offense forgiveness on the relationship between dispositional forgiveness and willingness to reconcile reveals the systematic interplay between dispositional forgiveness, specific offensive forgiveness, and reconciliation as theorised by McCullough et al. (1998). According to their proposition, dispositional or trait forgiveness is the distal determinant facilitating forgiving towards the offender in the casual chains, then the forgiving in relational offense might contribute to restore the relationship between the conflicted partners, identified as a willingness to reconcile in this study. The distal role of dispositional variables in the forgiveness mediation process

(McCullough et al., 1998; Shrout & Bolger, 2002) yields the answers as to why the relationship between dispositional forgiveness and willing to reconcile becomes smaller and not significant after including specific offensive forgiveness in the model.

Furthermore, the second nomological network evidence shows the negative relationship between rumination and forgiveness in the specific offensive event, being consistent with the previous finding from Greenberg (1995), McCullough et al. (2007) and Burnette et al. (2009) that rumination was negatively related to an individual's decision to forgive the offender. Forgiveness was then negatively related to intention to seek revenge against the offender. This is consistent with the correlation results found from McCullough et al. (2001). The partial mediating role of specific offense forgiveness on the relationship between rumination and seeking revenge reveals the linkage between rumination, specific offensive forgiveness, and seeking revenge. In the causal chain described by McCullough et al. (1998), rumination is the social-cognitive determinant of forgiving specific relationship partners. The repetitive thought towards the offensive event is the most proximal predictor of forgiveness, more rumination results and less forgiveness towards the offender. Moreover, individuals who cognitively ruminate about the event also maintain their motivation to seek revenge towards his or her wrongdoer. The proximal relationship between rumination and forgiveness, and rumination and seeking revenge might yield the partial mediating role of forgiveness in this model.

The results of the present study have implications for future research. Confirmatory factor analysis should be implemented in order to validate the underlying structure resulting from the exploratory factor analysis, confirming the construct validity of the four factor model of forgiveness construct derived from the scale. Given the limitation of a single sample analysis of the result, research in additional healthcare or other work contexts should be conducted. This further cross-sample study may present the generalisability of the measure across workplace relationships. Moreover, in the present study, the researcher conducted an internal replicability using the bootstrap method. The result provides evidence of the stable psychometric properties of the forgiveness scale; however, it is not a true replication analysis. Further external replicability should be implemented by collecting data from a new sample. This notwithstanding, to extend the nomological network of the forgiveness construct within the work context, future research should include more work-related variables. For

instance, further research should examine the role of work culture in facilitating forgiveness, the constructive or deconstructive behaviours related to forgiveness or unforgiveness, the work outcomes resulting from forgiveness such as performance, cohesiveness, and team climate. Also, due to the influence of Buddhism found in the forgiveness construct itself, further research should explain the forgiveness mechanism by including or applying Buddhist concepts (Phra Brahmagunabhorn (P.A. Payutto), 2007) such as the concept of loving-kindness and forgiveness, or the concept of a wisdom process, mainly in the cognitive domain, dealing with forgiveness as a way to reduce human suffering.

CHAPTER 6

THE ROLE OF LOVING-KINDNESS AND WISDOM PROCESSES ON THE FORGIVENESS MECHANISM: APPLYING BUDDHIST PRINCIPLES

Summary of the Hypothesised Model

This current study originally examined the role of loving-kindness and wisdom processes on the forgiveness mechanism within a nursing work context. The hypothesised model was specified from the Buddhist literatures suggesting that the structural relationship of five variables would affect forgiveness on a work-related specific offense, including loving-kindness, right view, meritorious will, thinking wisely, and perceived good friend. The hypothesised model was analysed using the two-stage procedure of structural equation modelling as mentioned by Anderson and Gerbing (1988), where the measurement models of variables included in the structural model are fitted first and then the later step is to fit the structural model. The figure 2.13 in chapter 2 represents the hypothesised model which includes six hypotheses to be tested is as follows:

H1: Loving-kindness has a positive direct effect on forgiveness.

H2: Meritorious will has a positive direct effect on loving-kindness.

H3: Thinking wisely has a positive direct effect on meritorious will.

H4: Right view has a positive direct effect on forgiveness.

H5: Perceived good friend has a positive direct effect on right view.

H6: Thinking wisely has a positive direct effect on right view.

The six hypotheses above were proposed to identify the relationship among the variables showing two paths of Buddhist constructs related to forgiveness: a path of loving-kindness (thinking wisely → meritorious will → loving-kindness → forgiveness); and a path of wisdom (thinking wisely and perceived good friend → right view → forgiveness).

Method

Participants

The population for this study is full-time and professional nurses in Thailand. The sample was drawn by cluster random sampling from nurses who work in 219 hospitals in a central area of Thailand under the administration of the ministry of public health. The data were collected from the participants working in the various clusters of operational units.

To determine minimum sample size necessary for the structural equation modelling to examine the hypothesised model in this study, the researcher conducted the procedure as proposed by MacCallum, Browne, and Sugawara (1996). This approach addresses the value of root-mean-square error of approximation (RMSEA; Steiger & Lind, 1980), which refers to the lack of fit of the hypothesised model to the population covariance matrix and behaves like a badness-of-fit index, a value of zero presents the best fit and higher values present a worse fit (Kline, 2005). RMSEA has an advantage which allows for the construction of confidence intervals to use for hypothesis testing about an estimate of model fit in the population. MacCallum et al. (1996) suggested the minimum value of sample size (N_{nim}) is determined in order to let the researcher conducts their model testing which will have adequate power for detecting if the null hypotheses are false, thereby avoiding waste and low-power investigations. Mininum N for test of not-close fit was conducted by giving null hypothesised RMSEA as H_0: $\varepsilon \geq 0.05$, when alternative hypothesised RMSEA is $\varepsilon = .01$, using the significance of the test statistic as $\alpha = 0.05$, desired power using $\pi_d = .80$ (MacCallum et al, 1996, p. 143), and degree of freedom = 81, as calculated by (p(p+1)/2) – free parameter when p is number of observed variable. Number of Free parameter was counted by the initial hypothesised model which included parameter estimates for13 factor loadings (3 for loving-kindness; 4 for forgiveness; 2 for right view; 4 for perceived good friend; however, the single measures of thinking wisely and meritorious will had not been counted for the error variance specification procedure as described in the results section for measurement model analysis), for 13 measurement error variances (3 for loving-kindness; 4 for forgiveness; 2 for right view; 4 for perceived good friend), for 2 latent independent variable variances (1 thinking wisely; 1 perceived good friend), for one latent independent variable covariance

between thinking wisely and perceived good friend, for 6 structure or path coefficients, and for 4 equation prediction error variances. The researcher calculated the minimum sample size by generating R code from Preacher and Coffman (2006). This code was further analysed by R Statistic Package resulting 201 participants minimally required for this study. The researcher officially contacted the director of the hospitals for data collection permission and cooperated with hospitals' staff to obtain their assistance. A package of questionnaires was sent to each participant with an introductory covering letter. Finally, after a month of data collection, the total participants were 350 nurses from five hospitals.

Missing data.The researcher was concerned about the issue of missing data and its effect to the generalisability of the results. Therefore, missing data processes were needed to help to reduce bias in the research findings from the multivariate analyses (Hair, Black, Babin, Anderson, &Tatham, 2006). All the missing data in this study were assumed to be unknown and not ignorable or happening due to nonresponse by participants. Missing value analysis using SPSS was conducted and revealed, in the total 350 participants, 17 cases (4.9 percents) were detected as having incomplete data. The missing cases had the percentages of missing responses range from .08 to 12.4. The percentages of cases with missing data for each variable are low, less than 1.4 %. Therefore, available case method (Kline, 2005) was considered to handle the missing data. This method is an ad-hoc approach dealing with missing data before any substantive analyses are done (Carter, 2006) and has an advantage that all analyses are tested with the same amount of cases (Kline, 2005). Seventeen cases with missing data, for instance case number 22, 33, 43,124, 125, 134, 136, 150, 163,172, 175, 257, 285, 286, 297, 307, and 327, were excluded from the dataset resulting in 333 participants finally included in this study. However, several concerns were raised such as that using the Listwise method would yield a smaller sample size which may result in lower statistical power and may be affected by nonrandom processes (Hair et al., 2006). Firstly, on considering the issue about the smaller sample size, the researcher is still confident that 333 participants included in this study would maintain a high level of statistical power when comparing the final sample size with minimal sample size, 201 participants, as calculated above. Furthermore, Listwise method assumes that the data are missing completely at random (MCAR) showing the pattern of missing value does not depend on

the data value. Little's MCAR test using SPSS were examined (SPSS Inc, 2007) by setting a null hypothesis that the data are missing completely at random. The Little's MCAR result revealed null hypothesis is not rejected, Chi-square = 928.822, *df* = 925, *p*-value = .458, showing that missing data are missing completely at random. As a result, the researcher was confident about handling the missing data with the listwise method.

Preliminary analyses of the characteristics of participants. As shown in table 6.1, the majority of participants were female (95.20%).At the time of data collection, the major levels of age were quite similar between 30-35 years old (29.13%) and 41-49 years old (28.53%). Most of the participants have been working more than 15 years (48.35%). Most of the participants have been working at surgery units (21.02%).

Moreover, the preliminary analyses showed the characteristics of the work-related offensive event (see table 6.1). The participants reported almost half of the offenders were their nurse colleagues (48.05%), their supervisors (19.22%), other professions (17.12%), and doctors (14.71%), respectively. The majority causes of the work-related offense were role conflict (24.62%), offender's misunderstanding (21.02%), injustice of workload (13.21%), personal bias and conflict (12.31%), performance error (9.61%), difference in profession and work status (8.11%), new in the job or task (6.91%), and other causes, such as a work-related opinion differing, social loafing, (2.40%), respectively.

Table 6.1

Summary of Characteristics of the Participants and Work-Related Offensive Events in Study3

Variables	Count	Percent
Characteristics of the participants		
Gender		
Female	317	95.20
Male	15	4.50
No response	1	.30
Levels of age		
less than 25 years	21	6.31
25-29 years	26	7.81
30-35 years	97	29.13
36-40 years	66	19.82
41-49 years	95	28.53
more than 49 years	28	8.41
Levels of tenure		
Less than 3 years	20	6.01
3-5 years	20	6.01
6-10 years	42	12.61
11-15 years	90	27.03
More than 15 years	161	48.35
Operation units		
Surgery	70	21.02
Inpatient service	68	20.42
General medicine	50	15.02
Intensive care unit	42	12.61
Pedriatics	24	7.21
Health promotion	13	3.90
Outpatient service	13	3.90
Obstetrics and Gynecology	12	3.60
Eye, ear, nose, and throat (EENT)	11	3.30
Psychiatry	10	3.00
Emergency	7	2.10
Orthopedic	4	1.20
Health academic	4	1.20
No response	5	1.50

Table 6.1 (continued)

Variables	Count	Percent
Characteristics of work-related offensive event		
Offender		
Nurse colleague	160	48.05
Supervisor	64	19.22
Other profession	57	17.12
Doctor	49	14.71
No response	3	.90
Causes of being offended		
Role conflict	82	24.62
Offender's misunderstanding	70	21.02
Injustice of workload	44	13.21
Personal bias & conflict	41	12.31
Performance error	32	9.61
Different in profession and work status	27	8.11
New in the job or task	23	6.91
Others	8	2.40
No response	6	1.80

Measures

Six scales measured constructs in the hypothesised model, including participant's demographic data were used in this study (see table 6.2). Five constructs were developed from the literature reviews and theoretical backgrounds of Buddhism, including loving-kindness, right view, meritorious will, thinking wisely, and perceived good friend. Forgiveness was measured by the 23-items scale of forgiveness which resulted from the quantitative conceptualisation of the forgiveness construct in the previous chapter.

Scale development procedure. Steps and procedures for scale development were guided by Netemeyer, Bearden, and Sharma (2003) which describes four steps in order to develop measures based on scaling self-report paper-and-pencil measures of latent social-psychological constructs. These procedures are as follows:

1. Construct the definition and content domain. The first step is concerned with reviewing concepts and theories within the literature. The researcher carefully studied all five constructs which are referenced mainly within Buddhist literature. The importance of clear construct definition, and content domain were addressed. The dimensionality of subscale or observed variable used for further measurement model analysis and its nature of measure, dispositional or specific-offensive, were achieved.

2. Generating and judging measurement items. The next step concerned achieving and judging a pool of items from the construct definition and its dimensionality derived from the first step. The researcher generated potential items and determined the rating format after carefully considering their validity. The content validities of all scales were examined by three experts in behavioural science and positive psychology. The feedback responses from each expert were used to refine the items of the scales.

3. Designing and conducting a pilot study to develop and refine the scale. The third step concerned empirical testing of the items on relevant respondents. This step was aimed to be an item-trimming procedure by examining the psychometric properties, reliability and item-total correlations (see table 6.2). The scales derived from this step would be used to collect a final sample for this study.

4. Finalising the scale. In this step, the researcher conducted the measurement model analysis through confirmatory factor analysis to determine the quality of the items belonging to each construct. Dimensionality, reliability, and the goodness of fit index of the proposed measurement model derived from the first step are also provided. The final measurement model of each scale was included in the structural equation modelling of the hypothesised model. Results of the final scales and their measurement model are presented in the result section.

Demographic Questionnaire. The demographic questionnaire comprised a total of six questions. Respondents completed the demographic questionnaire which included four questions about gender, age, tenure, and unit of operation. Two work-related offense questions were asked about who was the offender (nurse colleague, supervisor, doctor, or other profession), and cause of being offended.

Loving-kindness. From the Buddhist literatures, loving-kindness is a state where a person behaves according to friendship, goodwill, understanding, and the wish to help others attain benefit and well being. The Loving-Kindness Scale was operationalised through the concept of the principle of harmony (Phra Brahmagunabhorn (P.A. Payutto), 2004, p. 23-24), which defines loving-kindness including three dimensions of the social benefactors: friendly thought, friendly speech, and friendly act. Fifteen items were developed, with five items belonging to each dimension. The items were designed in terms of offense-specific responses by instructing the respondents to choose the answer which describes best their behaviour towards the person who has hurt them in the past. The items were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*. Higher scores on this scale indicate a greater level of loving-kindness towards the offender.

Example items of The Loving-Kindness Scale.

Friendly Act subscale. Example of an item measures friendly act is as follows:

I. I greet him/her with a cheerful look.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Friendly Speech subscale. Example of an item measures friendly speech is as follows:

II. I still talk with him/her politely.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Friendly Thought subscale. Example of an item measures friendly thought is as follows:

III. I wish him/her to fail in his/her work (negative item).

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Pilot study on The Loving-Kindness Scale. Fifty nurses were included in a pilot study examining the psychometric properties, internal consistency and item-total correlation, of the scales included in the hypothesised model. By using SPSS, alpha reliability analysis of internal consistency and item-total correlation analysis were achieved on 15 items of The Loving-Kindness Scale. The results show the internal consistency of the alpha reliability for the Friendly Act subscale (5 items) was .83, for the Friendly Thought subscale (5 items) was .81. Both two subscales represented a good level of reliability. Another subscale, Friendly Speech (5 items), was .60, nevertheless, it was deemed to be a satisfactory level of reliability as mentioned by Aiken (2000). The item-total correlations of items belonging to the Friendly Act subscale ranged from .59 to .76, items linked to Friendly Speech subscale ranged from .23 to .50, and items belonging to the Friendly Thought subscale ranged from .51 to .70.

Right View. The definition of right view referred to in the Buddhist literature is the right understanding or belief of an individual about their world. They realise how to live according to morality or ethics, and are aware of the causes and effect of wholesome and unwholesome behaviour. The Right View Scale was achieved by the concept of mundane right view (Phra Brahmagunabhorn (P.A. Payutto), 2009, p.737-740), which refers that right view would be measured by the investigation of two components: 1) Understanding the behaviour regarding cause and effect or Karma; 2) Understanding the behaviour regarding what are considered as beneficial views which encourage goodness and happiness for their own life and society (morality and ethics). Thirteen items were developed, with 5 items linked to the Understanding Behaviour in accordance with Karma subscale and 8 items linked to the Understanding Behaviour in accordance with Beneficial View subscale. All items were measured in terms of a dispositional scale

representing the likelihood of their response in general inter-relationship conflict circumstances. The items were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*. Higher score on this scale indicates a greater level of right view towards the offender and the offense in general.

Example items of The Right View Scale.

Understanding Behaviour in accordance with Karma subscale. Example of an item measures understanding behaviour regarding with Karma is as follows:

I. I believe that if I have done a good thing, a good result will be returned back to me.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Understanding Behaviour in accordance with Beneficial View subscale. Example of an item measures understanding behaviour regarding with beneficial view is as follows:

II. I understand that holding anger will be harmful to me.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Pilot study on The Right View Scale. Alpha reliability analysis of the internal consistency and item-total correlation analysis were achieved on 13 items of The Right View Scale. The results show satisfactory evidence with the internal consistency of alpha reliability for Understanding Behaviour in accordance with Karma subscale being .67, and for Understanding Behaviour in accordance with Beneficial View subscale .76. The item-total correlations of items linked to Understanding Behaviour in accordance with Karma subscale ranged from .24 to .62, and items linked to Understanding Behaviour in accordance with Beneficial View subscale ranged from .34 to .63.

Meritorious Will. This construct refers to the mental state in which individuals desire or wish to live and exist with well-being and behaves like a positive motivation to do wholesome things. The Meritorious Will Scale was a unidimensional scale which was operationalised by the concept of meritorious will by Phra Brahmagunabhorn (P.A. Payutto, 2009, p. 510), which defined meritorious will as an aspiration to a good quality of life such as loving cleanliness, wishing to be peaceful, loving nature, desiring to live within a good environment. The researcher developed the 8 items on this scale within the work-context reflecting a desire for good quality of work life in general. The items were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*. Higher score on this scale indicate a greater level of meritorious will on work life.

Examples of the items measuring meritorious will are as follows:

I. I would love to work with duties I can serve or help others.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

II. I wish to work in a peaceful workplace.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Pilot study on The Meritorious Will Scale. Alpha reliability analysis of internal consistency and item-total correlation analysis were achieved on 8 items of The Meritorious Will Scale. The internal consistency for the scale was good with alpha reliability of .81. The item-total correlations of the items belonging to this scale ranged from .40 to .63

Thinking wisely. In Buddhist literature, proper methods or strategies which individuals thoughtfully use to examine, reflect, trace, and analyse the problem they face in order to see it true nature, solve the problem, and bring about a benefit is called thinking wisely. Individuals who are skilled in this kind of thinking will understand the

perspective which will enable them to gain benefits in their life. The Thinking wisely Scale was measured by unidimensional construct operationalised by the concept of meritorious stimulation method of thinking wisely (Phra Brahmagunabhorn (P.A. Payutto, 2009, p. 737), which intends to cut off and to diminish the craving motivation of individuals. This method encourages meritorious growth and the mundane right view among individuals who are practicing it. The process of this method is that individuals focus their cognitive state on what is the wholesome or unwholesome thing, then lead their motive to the wholesome perspectives and act in good ways. Twelve items on this scale were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*. Respondents were instructed to consider and reflect about the thinking strategies they use to deal with the specific offense of their inter-relationship conflict. Higher scores on this scale indicate a greater level of meritorious thinking wisely towards the offensive situation.

Examples of the items measuring meritorious thinking wisely are as follows:

When I think about what he had wronged me.....

I. I try to pursue my thought into other good things.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

II. I try to think that anger or revenge will affect badly on my mental health.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Pilot study on The Thinking wisely Scale. Alpha reliability analysis of the internal consistency and item-total correlation analysis were achieved on 12 items of The Thinking wisely Scale. The results showed good internal consistency for a scale, with an alpha reliability of .89. The item-total correlations of items linked to this scale ranged from .50 to .80.

Perceived Good Friend. This construct refers to individuals' perception that they have a good friend who makes suggestions, gives advice, or give information in order to encourage social conditions which are wholesome and helpful for individuals. The scale was operationalised using the concept of the true friends (Phra Brahmagunabhorn (P.A. Payutto), 2004, p. 2-3), which mentioned the qualities of a good friend should be of four kinds: the benefactor friend, comrade friend, advisory friend, and cherished friend. Twelve items, with three items linked to each subscale, were placed on a Likert-type scale with six rating points from *strongly disagree* to *strongly agree*. Higher scores on this scale indicate that individuals perceive themselves as having been provided with a higher level of wholesome or helpful support from their friends when they had a work-related problem.

Example items of The Perceived Good Friend Scale.

Benefactor Friend subscale. Example of an item that measures perceived benefactor friend is as follows:

I. He/She always protects and cheers me up.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Comrade Friend subscale. Example of an item that measures perceived comrade friend is as follows:

II. When I am troubled, he/she will always be on my side.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Advisory Friend subscale. Example of an item that measures perceived advisory friend is as follows:

III. He/She always suggest to me how should I behave in a good moral way.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Cherished Friend subscale. Example of an item that measures perceived cherished friend is as follows:

IV. He/She is very happy when I am successful.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Pilot study on The Perceived Good Friend Scale. Alpha reliability analysis of the internal consistency and item-total correlation analysis were achieved on 12 items of The Perceived Good Friend Scale. The results show satisfactory evidence with the internal consistency, the alpha reliability, for Benefactor Friend subscale being .82, for Comrade Friend subscale it was .61, for Advisory Friend subscale it was .91, and for Cherished Friend subscale it was .79.The item-total correlations of items linked to the Benefactor Friend subscale ranged from .38 to .65, for items linked to the Comrade Friend subscale they ranged from .28 to .58, for items linked to the Advisory Friend subscale they ranged from .74 to .82, and for items belonging to the Cherished Friend subscale they ranged from .66 to .78.

Forgiveness. The 23-items of The Forgiveness Scale developed and validated in the previous chapter was used to measure forgiveness towards a specific offender within a specific work-related offense. The scale instructed the respondents to choose the answer that best described their thoughts, feelings, and actions towards the person who has hurt or mistreated them in the past. The scale included four dimensions: Overcoming Negative Thought and Feeling towards the Offender (6 items), Seeking to Understanding the Offender's Reasons (4 items), Fostering Positive Approaches towards the Offender (8 items), and Belief in the Benefits of Forgiveness (5 items). Items were placed on a Likert-

type scale with six rating points from *strongly disagree* to *strongly agree*. Higher score on this scale represents greater forgiveness towards the offender.

Example items of The Forgiveness Scale.

Overcoming Negative Thoughts and Feelings towards the Offender subscale. Example of an item measures Overcoming Negative Thoughts and Feelings towards the Offender subscale is as follows:

I. I no longer hold any grudge against him/her.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Seeking to Understanding the Offender's Reasons subscale. Example of an item measuring the Seeking to Understanding the Offender's Reasons subscale is as follows:

II. I try to think about the reasons why he/she had wronged me.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Fostering Positive Approaches towards the offender subscale. Example of an item measuring Fostering Positive Approaches towards the offender is as follows:

III. Although he/she had hurt me before, I still have a good feeling towards him/her.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Belief in the Benefits of Forgiveness subscale. Example of an item measuring Belief in the Benefits of Forgiveness subscale is as follows:

IV. I believe that forgiving him/her is a highest merit.

.....	.....	.....	.....	.....	.....
Strongly Disagree	Disagree	Quite Disagree	Quite Agree	Agree	Strongly Agree

Pilot study on The Forgiveness Scale. Alpha reliability analysis of internal consistency and item-total correlation analysis were achieved on 23 items of The Forgiveness Scale. The results show good evidence with the internal consistency of alpha reliability, for Overcoming Negative Thought and Feeling subscale being .79, for Seeking to Understand the Offender's Reasons subscale.76, for Fostering Positive Approaches towards the offender subscale .89, and for Belief in the Benefits of Forgiveness subscale .87.The item-total correlations of items linked to Overcoming Negative Thought and Feeling subscale ranged from .20 to .75, for Seeking to Understand the Offender's Reasons subscale they ranged from .50 to .61, for Fostering Positive Approaches towards the offender subscale they ranged from .53 to .82, and for Belief in the Benefits of Forgiveness subscale they ranged from .61 to .81.

Table 6.2

List of Construct, Scales, and Their Characteristics in This Study

Construct	Name of the scale	Type of measure	Initial scale (n=50)			Scale after conducted CFA (n=333)			
			Subscale	No. of items	Alpha	Subscale	No. of items	Alpha	Composite Reliability
1. Loving-kindness	Loving-Kindeness Scale	Offensive-specific	1. Friendly act	5	.83	1. Loving-kindness (single indicator)	8	.87	.88
			2. Friendly speech	5	.60				
			3. Friendly thought	5	.81				
2. Right View	Right View scale	Disposi-tional	1. Understanding behaviour in accordance with Karma	5	.67	1. Understanding behaviour in accordance with Karma	5	.74	.79
			2. Understanding behaviour in accordance beneficial view	8	.76	2. Understanding behaviour in accordance with beneficial view	7	.78	.81

Table 6.2 (continued)

Construct	Name of the scale	Type of measure	Initial scale (n=50)			Scale after conducted CFA (n=333)			
			Subscale	No. of items	Alpha	Subscale	No. of items	Alpha	Composite Reliability
3. Meritorious Will	Meritorious Will scale	Disposi-tional	1.Meritorious will (single indicator)	8	.81	1.Meritorious will (single indicator)	8	.90	.89
4. Thinking wisely	Thinking wisely scale	Offensive-specific	1. Meritorious stimulation method of thinking wisely (single indicator)	12	.89	1. Meritorious stimulation method of thinking wisely (single indicator)	12	.93	.93
5. Perceived Good Friend	Perceived Good Friend scale	Disposi-tional	1. Benefactor friend	3	.82	1. Benefactor friend	3	.72	.78
			2. Comrade friend	3	.61	2. Comrade friend	3	.60	.67
			3. Advisory friend	3	.91	3. Advisory friend	3	.88	.89
			4. Cherished friend	3	.79	4. Cherished friend	2	.72	.73

Table 6.2 (continued)

Construct	Name of the scale	Type of measure	Initial scale (n=50)			Scale after conducted CFA (n=333)			
			Subscale	No. of items	Alpha	Subscale	No. of items	Alpha	Composite Reliability
6. Forgiveness	The Forgiveness scale	Offensive-specific	1. Overcoming negative thought and feeling towards the offender	6	.79	1. Overcoming negative thought and feeling towards the offender	5	.79	.80
			2. Seeking to understand the offender's reasons	4	.76	2. Seeking to understand the offender's reasons	3	.79	.79
			3. Fostering positive approaches towards the offender	8	.89	3. Fostering positive approaches towards the offender	4	.84	.86
			4. Belief in the benefits of forgiveness	5	.87	4. Belief in the benefits of forgiveness	4	.89	.90

Data Analysis

For this study, the hypothesised model of the structural relationships between loving-kindness, wisdom process, and forgiveness was tested. The researcher intended to examine both constructs' measurement models and their interrelationship confirming if the proposed model and empirical data were satisfactory fits. One of the advanced multivariate methods that has been used for a confirmatory approach within psychological and social science research is Structural Equation modelling (SEM; Anderson &Gerbing, 1988). This method aims to examine the relationships among multiple constructs by combining two multivariate techniques, including factor analysis and multiple regression analysis. SEM has three distinct characteristics from the general multivariate analysis: first, the multiple and interrelated dependence relationship can be estimated; second is the ability to include unobserved concepts in the relationship model and correct for error of measurement in the estimation procedure; finally, all sets of relationships can be explained by the prior specification (Hair, Black, Babin, Anderson, &Tatham, 2006; Byrne, 2010). By this method, a hypothesised model can be empirically tested in a simultaneous analysis of the entire system of constructs to identify the degree to which it is consistent with a given set of data (Byrne, 2010).

The two-step approach of SEM proposed by Anderson and Gerbing (1988) was applied to this study. The first stage is finding an acceptable measurement model. The researcher first tested measurement models for all of six intended constructs, loving-kindness, right view, meritorious will, thinking wisely, perceived good friends, and forgiveness using confirmatory factor analysis (CFA). Since most of the measurement models were operationalised initially from the Buddhist concepts, the CFA for scale development was used to assure the prior hypothesis about the relationship of a set of measurement items to their linked factor. CFA can be conducted identifying the individual items which may threaten the dimensionality of the scale, reflecting a poor item and it could be trimmed to gain a better measurement model (Netemeyer et al., 2003). Therefore, in this stage, loading between items and construct's subscales which behaved like latent factors (for example with forgiveness construct, item s1 to s6 were treated as observed variables of Overcoming Negative Thought and Feeling towards the Offender which acted as a latent variable) were tested. The second stage, after establishing the measurement model, the structural model of the hypothesised model was

examined; parameter estimates and goodness of fit indices are provided. The researcher considered whether the structural model was a satisfactory fit with the empirical data. If the finding showed a worse fit, several information including fit indices, standardised residual, and modification indices would be used to respecify the model (Kline, 2005).

To examine the overall fit of the model in this study, the researcher used several fit indices to assess the goodness of fit for the hypothesised models to the data. The first index is a model chi-square (χ^2), which is the traditional index for identifying overall model fit and refers to the degree of discrepancy between the sample and fitted covariance matrices (Hu &Bentler, 1995). A good fit is indicated by the nonsignificance of chi-square. The value of chi-square indicates poor fit due to the higher its value, the worse the tested model's fit to the data (Kline, 2005). However, with a large sample size, the chi-square value is always significant and with a small sample size, the probability level is inaccurate (Tabachnick&Fidell, 2007). Therefore, other measures of model fit have been provided. Another index which reduces the sensitivity of chi-square to sample size is normed chi-square (NC; Kline, 2005). By dividing chi-square value by the degree of freedom, the NC value is less than 2, or 3, or even high as 5 indicating a reasonable fit (Bollen, 1989). Another fit index used in this study is Root Mean Square Error of Approximation (RMSEA; Steiger, 1990), which estimates the lack of fit in a model compared with a saturated model representing the degree to which the proposed model is a misspecified one. The RMSEA value which is zero identified is the best fit and higher values indicate a worse fit. MacCullum et al. (1996) suggested RMSEA less than .08 to indicate a good fit and RMSEA of between .08 to .10 to indicate a mediocre fit. Moreover, Comparative Fit Index was used to assess goodness of fit in this study. This index is known as incremental fit, which reflect the relative improvement in the fit of the hypothesised model compared with a null model (assumes that all latent variables are uncorrelated). The CFI value ranged from 0 to 1.0, the closer to 1.0 indicates a good fit. Kline (2005) suggested CFI should be greater than .90 indicates a good fit of the researcher's model. Finally, another type of incremental fit indices, Non-Normed Fit Index (NNFI) is used in this study. The NNFI value closer to 1.0 indicates a good fit. Hooper, Coughlan, and Mullen (2008) recommended NNFI values more than .80 as the threshold. Summary of goodness of fit indices used in this study can be shown on table 6.3

Table 6.3

Summary of Fit Indices and Their Acceptance Thresholds for This Study

Fit Index	Acceptable Threshold levels
Chi-square (χ^2)	Low chi-square relative to degrees of freedom with p value less than .05
Normed chi-square (NC)	NC is less than 3
Root Mean Square Error of Approximation (RMSEA)	RMSEA < .08 indicates a good fit RMSEA ranged between .08 to .10 indicates a mediocre fit
Comparative Fit Index (CFI)	CFI > .90 indicates a good fit
Non-Normed Fit Index (NNFI)	NNFI > .80 indicates a good fit

Furthermore, regarding to the parameter estimation, maximum likelihood estimation (MLE) was employed using the LISREL programme (Joreskog & Sorbom, 1993). This method of estimation is more efficient and unbiased when the data represent multivariate normality (Hair et al., 2006). MLE is an iterative process in which the observed covariance matrix is contrasted with an implied matrix in order to minimize the distinction between the observed and implied matrices (Netemeyer et al., 2003). By using LISREL on structural equation modelling, it provided the researcher with sufficient information on parameter estimates, goodness of fit indices, and modification index (MI).

Results

This current study originally examined the role of loving-kindness and wisdom processes on the forgiveness mechanism within a nursing work context. The hypothesised model was specified from the Buddhist literature suggesting that the structural relationship of five variables would affect forgiveness on a work-related specific offense, including loving-kindness, right view, meritorious will, thinking wisely, and perceived good friend. The researcher applied the two-stage procedure of structural equation modelling as mentioned by Anderson and Gerbing (1988), where the measurement models of variables included in the structural model are fitted first and then the later step is to fit the structural model.

The results section that follows contains two parts: the measurement model analysis; and examination of the structural model as hypothesised from the Buddhist literature. The first part, the measurement model analysis, provides evidence of convergent validity reflecting the quality of items and dimensionality as initial developed from the Buddhist constructs. Confirmatory factor analysis for scale development was conducted to confirm a prior hypothesis about the relationship of a group of measurement items to their linked factors and to confirm the factor structures which were specified as measurement models of the variables included in the structural model (Netemeyer et al., 2003). The findings of the measurement model analysis of six constructs, consisting of loving-kindness, right view, meritorious will, thinking wisely, perceived good friend, and forgiveness were provided respectively. The testing of the structural model is worthless unless it is first ascertained that the measurement model holds. The second part, full structural equation model of the hypothesised model was tested to assess the goodness of fit of the proposed model. If the model represented a poor fit with the empirical data, the residual variance and modification indices will be used to trim or to adjust the parameters in the model aiming to achieve a better fit with the data. The parameter estimates are also provided, including path coefficients (direct effect, indirect effect, and total effect) and squared multiple correlations.

The Findings of the Measurement Model Analysis

Examination of the measurement model using confirmatory factor analysis was conducted at an item-level of the intended construct. This method could be used to detect individual items, which may threaten the overall fit of the measurement model. The researcher provides graphic representation, fit indices, and parameter estimates of the measurement model for loving-kindness first, then for right view, meritorious will, thinking wisely, perceived good friend, and forgiveness, respectively.

Normality Test. The estimation technique of Maximum Likelihood used in this study assumes that the data follow multivariate normality. The existence of non-normality would affect the accuracy of the parameter estimation by MLE. The PRELIS programme of LISREL allowed the researcher to determine the skewness and kurtosis of the measured items. All items measuring the constructs in this study were examined for skewness, kurtosis, and skewness and kurtosis combined. The results of the LISREL output showed that the skewness, the kurtosis, and the skewness and kurtosis of the measured items were mostly significant ($p < .01$) revealing that non-normality existed among the items. Therefore, the transformation of measured items was computed (Tabachnick & Fidell, 2007). The researcher applied the normal scores (NS) method by LISREL to the multivariate dataset (Joreskog & Sorbom, 1999). After transforming the data to normal scores, the result of the skewness, the kurtosis, and the skewness and kurtosis of the measured items were satisfied.

Measurement model of loving-kindness. CFA was used to confirm the 15-item, 3-factors measure of loving-kindness, for Friendly Thought (item s24, s27, s32, s35, s38), for Friendly Speech (s25, s28, s30, s33, s36), and for Friendly Act (s26, s29, s31, s34, s37). The CFA of the initial measurement model of loving-kindness converged, however it gave an unacceptable overall fit. The results showed a significant chi-square value $\chi 2 = 802.71$, $df = 87$, $p < .01$; the NC = 9.23 indicating a poor fit; although the incremental fit indices showed acceptable fit, CFI = .92; NNFI = .90, however, the RMSEA = .16 indicated a poor fit. These goodness of fit results suggested a respecification of the 3-factor measurement model of loving-kindness. The researcher considered the parameter estimates in the model and found that the PHI matrix, which represents the correlations between latent variables (factors), were very high, almost reaching 1.0, suggesting that

the three factors completely shared the variance together. Therefore, a one-factor model of loving-kindness was proposed. In the first iteration, by using the Modification Index (MI) coupled with conceptual and theoretical considerations, seven items which showed consistent correlated measurement errors or a large number of standardised residuals were deleted. A high level of correlation among error terms of the items can be affected by item wording redundancy or common wording (Netemeyer et al., 2003). Due to the researcher intending that the measurement model analysis in this step was for scale development, which initiated from the Buddhist construct, therefore the deletion of an item was used to obtain the best fit of the measure. The resulting 8-item, 1 factor model of loving-kindness showed a reasonable fit. There was a significant chi-square value ($\chi 2$ = 48.23, *df* = 16, $p < .01$), however, the chi-square is sensitive to a large sample size. The researcher assessed other indices of fit: the NC = 3 indicated a good fit; the incremental fit indices showed a good fit, CFI = .99 and NNFI = .98; RMSEA = .078 indicated an acceptable fit. The graphic representation of the adjusted measurement model of loving-kindness with standardised parameter estimates are illustrated in figure 6.1.

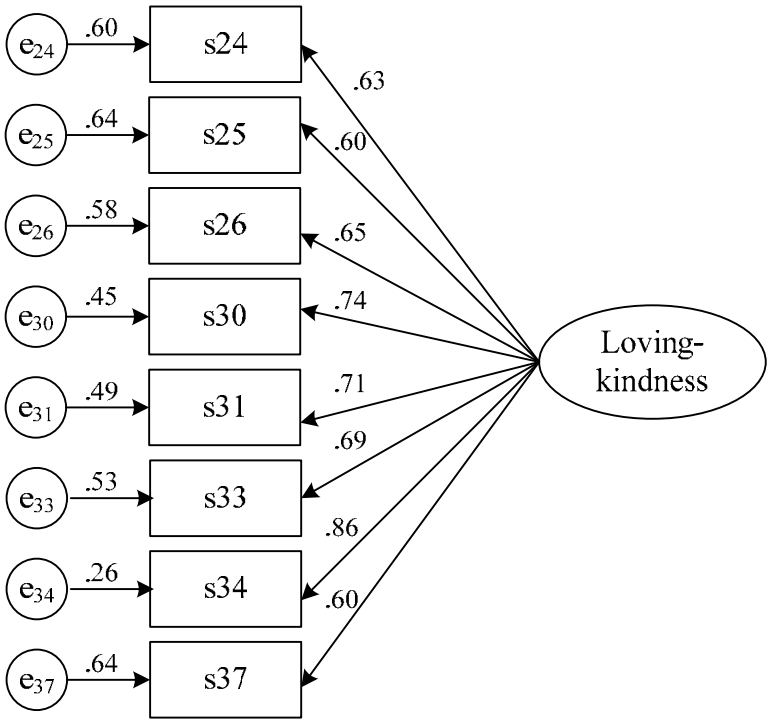

Figure 6.1. Retained 8-item, 1 factor model of the loving-kindness construct.

Furthermore, the composite reliability for a factor was investigated from the squared sum of factor loadings (λ_i) for a factor and the sum of the error variance terms (δ_i) of items linked to the factor (Hair et al., 2006, p. 777), as follows:

$$composite\ reliability = \frac{(\sum_{i=1}^{n} \lambda_i)^2}{(\sum_{i=1}^{n} \lambda_i)^2 + (\sum_{i=1}^{n} \delta_i)}$$

From the equation above, the squared sum of factor loadings is (.63 + .60 + .65 + .74 + .71 + .69 + .86 + .60)^2 = 30.03, and the sum of the error variance terms is (.60 + .64 + .58 + .45 + .49 + .53 + .26 + .64) = 4.19. Hence, the composite reliability of the single model of loving-kindness is .88, showing good reliability of the measure.

Measurement model of Right View. CFA was used to confirm the 13-item, 2 factor measure of right view, for Understanding Behaviour in accordance with Karma (item d1 to d5) and for Understanding Behaviour in accordance with Beneficial View (item d6 to d13). The CFA of the initial measurement model of right view converged, however it gave quite an unacceptable overall fit. The results showed a significant chi-square value of $\chi 2$ = 203.94, *df* = 64, *p* <. 01; the NC = 3.18 indicating a poor fit; although the incremental fit indices showed an acceptable fit, CFI = .96; NNFI = .95, however, the RMSEA = .081 indicated it was close to an acceptable fit. This goodness of fit results suggested a respecification of items belonging to the 2-factor measurement model of right view. In the first iteration, by using the Modification Index (MI) coupled with conceptual and theoretical consideration, item d8 (*I believe that sometime lying commonly occurs in this society*) was deleted due to its wording redundancy. This resulted in a12-item, 2 factor model of right view, 5 items for Understanding Behaviour in accordance with Karma and 7 items for Understanding Behaviour in accordance with Beneficial View showing a reasonable fit. Though there was a significant chi-square value ($\chi 2$ = 153.39, *df* = 53, *p* < .01), the chi-square is sensitive to large sample sizes. The researcher assessed other indices of fit: the NC = 2.89 indicated a good fit; the incremental fit indices showed good fit, CFI = .97 and NNFI = .96; RMSEA = .076 indicated an acceptable fit. The composite reliability for Understanding Behaviour in accordance with Karma is .79 and for Understanding Behaviour in accordance with Beneficial View is .81, showing good reliability of both subscales. The graphic

representation of the adjusted measurement model of right view with standardised parameter estimates are illustrated in figure 6.2.

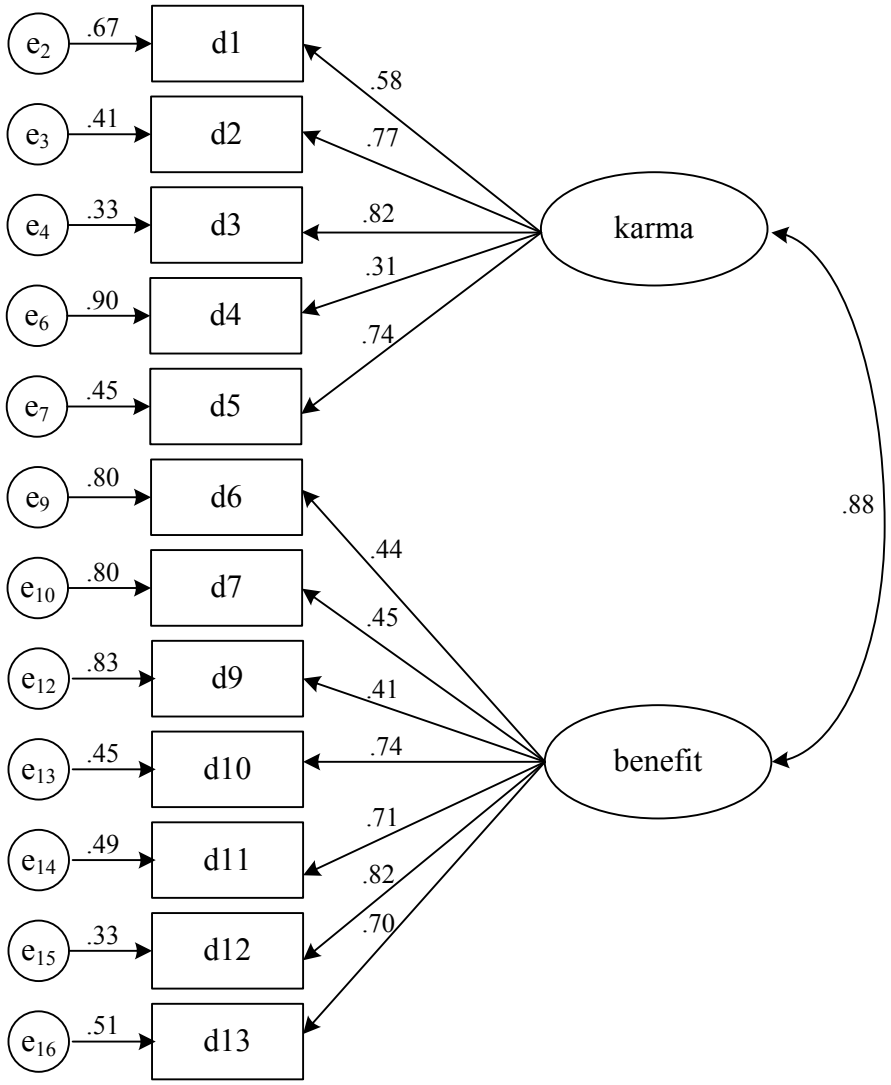

Figure 6.2. Retained 12-item, 2 factor model of right view construct.

Measurement model of Meritorious Will. CFA was used to confirm the 8-item, unidimensional measure of meritorious will (d17 to d24). The CFA of the measurement model of meritorious will converged and gave an acceptable overall fit. The results showed a significant chi-square value $\chi 2$ =12.38, *df* = 12, $p < .42$; the NC = 1.03; CFI = 1.0; NNFI = 1.0; and the RMSEA = .01 indicating a good fit of the measurement model of meritorious will in which all 8 items were linked to a single factor. The composite reliability of meritorious will is .89, showing good reliability of the measure. The graphic

representation of the measurement model of meritorious will with standardised parameter estimates is illustrated in figure 6.3.

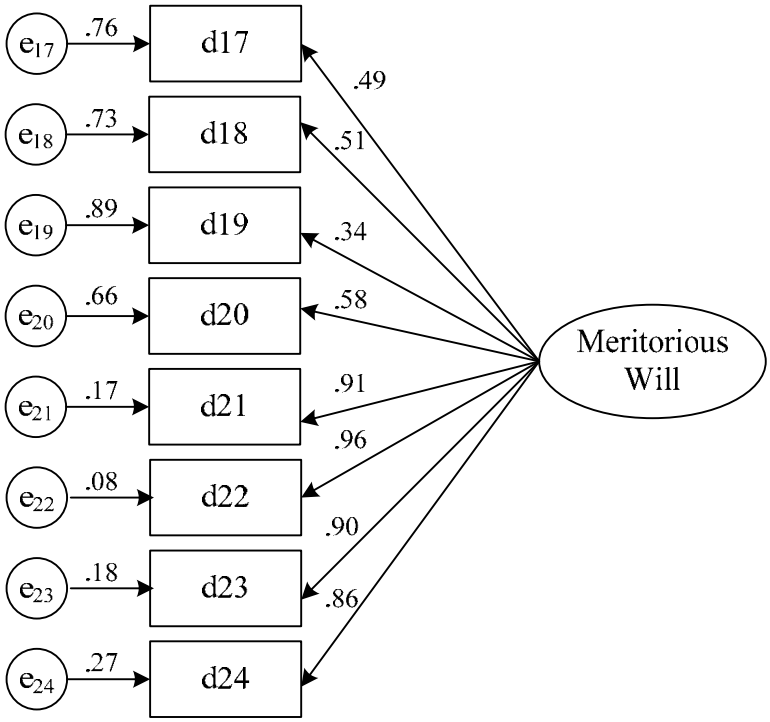

Figure 6.3. 8-item, unidimensional model of the meritorious will construct.

Measurement model of Thinking wisely. CFA was used to confirm the 12-item, unidimensional measure of thinking wisely (s53 to s64). The CFA of the measurement model of thinking wisely converged and gave an acceptable overall fit. The results showed a significant chi-square value $\chi 2$ =85.58, *df* = 45, $p < .01$; the NC = 1.90; CFI = .99; NNFI = .99; and the RMSEA = .052 indicating a good fit of the measurement model of thinking wisely in which all 12 items were linked to a single factor. The composite reliability of thinking wisely is .93, showing good reliability of the measure. The graphic representation of the measurement model of thinking wisely with standardised parameter estimates is illustrated in figure 6.4.

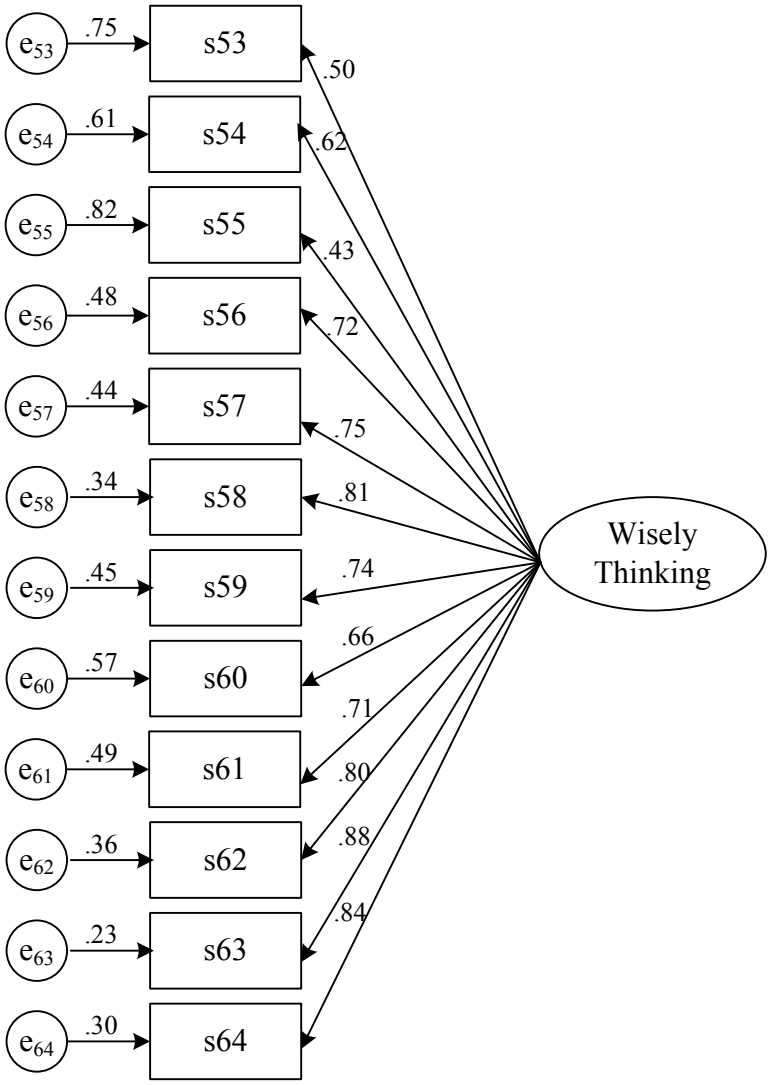

Figure 6.4. 12-item, unidimensional model of the thinking wisely construct.

Measurement model of perceived good friend.CFA was used to confirm the 12-item, 4 factor measure of perceived good friend, for Benefactor Friend (item g1 to g3), for Comrade Friend (item g4 to g6), for Advisory Friend (g7 to g9), and for Cherished Friend (g10 to g12). The CFA of the initial measurement model of perceived good friend converged, however it gave quite an unacceptable overall fit. The results showed a significant chi-square value $\chi 2 = 177.95$, $df = 48$, $p < .01$; the NC = 3.71 indicating a poor fit; although the incremental fit indices showed an acceptable fit, CFI = .98; NNFI = .97, however, the RMSEA = .09 indicated it was close to an acceptable fit. This goodness of fit results suggested a respecification of items belonging to the factors of the perceived good friend scale. In the first iteration, the modification index revealed a high correlation of the error terms between item g11 (*when I was gossiped by someone, he/she will defend*

him/her for me) and item g10 (*when I feel suffered, he/she will sympathise with me*), showing some common wording between the items. This suggested deletion of one item. The researcher carefully re-read the content of both items and overall definition of perceived cherished friend. The decision was made to delete item g11 because the item g10 better reflected the content of Cherished Friend. This resulted in an 11-item, 4 factor model of perceived good friend, 3 items for Benefactor Friend, 3 items for Comrade Friend, 3 items for Advisory Friend, and 2 items for Cherished Friend which showed a reasonable fit. There was a significant chi-square value ($\chi 2 = 103.15$, $df = 38$, $p < .01$), however, the chi-square is sensitive to large sample sizes. The researcher assessed other indices of fit: the NC = 2.71 indicated a good fit; the incremental fit indices showed a good fit, CFI = .99 and NNFI = .98; RMSEA = .072 indicated an acceptable fit. The composite reliability for Benefactor Friend is .78, for Advisory Friend is .89, and for Cherished Friend is .73, showing a good fit for the measures. The composite reliability for Comrade Friend is .67, showing an acceptable fit for this measure. The graphic representation of the adjusted measurement model of perceived good friend with standardised parameter estimates is illustrated in figure 6.5.

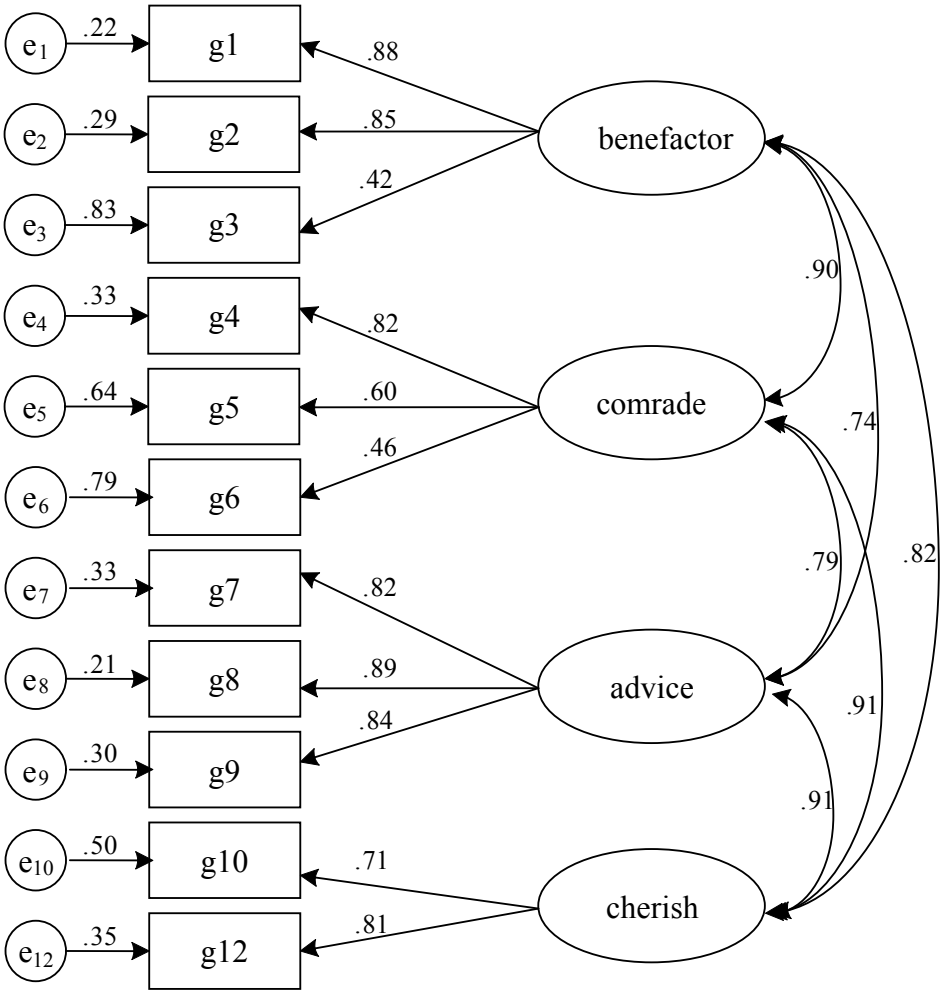

Figure 6.5. Retained 11-item, 4 factor model of perceived good friend construct.

External replicability of the measurement model of forgiveness. CFA was used to confirm the factor structure of the 23-item, 4 factor model of the Forgiveness Scale developed from an exploratory factor analysis in the previous study. This measurement model included four factors, Overcoming Negative Thought and Feeling towards the Offender (ON; item f1 to f6), Seeking to Understand the Offender's Reasons (SR; item f7 to f10), Fostering Positive Approaches towards the Offender (FP; item f11 to s18), and Belief in the Benefit of Forgiveness (BB; item f19 to f23). The CFA of the initial measurement model of perceived good friend converged, however it gave quite unacceptable overall fit. The results showed a significant chi-square value $\chi 2 = 826.63$, $df = 224$, $p < .01$; the NC = 3.71 indicating a poor fit; although the incremental fit indices showed acceptable fit, CFI = .95; NNFI = .94, however, the RMSEA = .09 indicated an

almost acceptable fit. The goodness of fit results suggested a respecification of items belonging to the factors of the forgiveness scale.

In the first iteration, the modification index (MI) revealed a high correlation of the error terms between item f13 (*I think he/she is a good person although he/she had hurt me in the past*) and item f14 (*I can see the good side of him/her*), showing some common wording between the items. The researcher carefully re-read the content of both items and the overall definition of Fostering Positive Approaches towards the Offender subscale. The decision was made to delete item f13because the item f14 was shorter, clearer and from a statistical viewpoint, the factor loading was higher than that of f13. In the second iteration, MI suggested a high correlation of the error terms between f22 (*I believe that in forgiving him/her, I would find wholesome things in my life*) and f23 (*I believe that forgiveness is to do a merit to myself*). When the researcher considered the items in the Thai language in f23, to do a merit is referred to as a good Karma. However, this sentence is perhaps being interpreted as an unclear because, in general, Thais usually link Karma with a bad result. Therefore, the researcher was more confident in retaining item f22 than f23 as the meaning was clearer. In the third iteration, MI suggested a high correlation of the error terms between f16 (*I am now friendly to him/her*) and f17 (*If he/she needs help, I will not hesitate to offer my assistance*). The decision was made to drop item f16 because when the two items were examine the content of item f17 seemed to be more salient referring to positive behaviour towards the offender. The forth iteration revealed an MI suggesting that there was a problem of a high correlation of the error terms of f7 (*I try to think about the reasons he/she had wronged me*) and f8 (*I attempt to understand the reason behind his/her or her actions*). These two questions had the same content about the seeking the offender's reason. The MI suggested that deleting f7 would result in a better overall model fit. Therefore, the decision made to drop f7. The fifth iteration showed an MI that suggested that f2 (*I cannot stop thinking about how he/she had wronged me*) had a high correlation of the error terms with several items (ie., s3, s5, s6) representing non-uniqueness of item f2 on the first factor. The researcher considered the items remaining in the factor which also represented the measure of Overcoming Negative Thought and Feeling towards the Offender, as a result, the item f2 was dropped. The sixth iteration revealed that item f12 (*I think he/she is just an ordinary person who is likely to make a mistake*), which linked to Fostering Positive Approaches towards the

Offender, has a high cross-loading on factor 2- Seeking to Understand the Offender's Reasons. The researcher reconsidered the content of f2 and judged that wording of f2 was ambiguous in relation to both factors. Hence, item f2 was dropped. The seventh iteration showed that the item f11 (*I continue to think about how he/she had wronged me because he/she is a bad person*) was linked to Fostering Positive Approaches towards the Offender. This item was intended to be a reverse scored or negative item for this factor; however, the results showed that f11 had a high cross-loading on the first factor- Overcoming Negative Thought and Feeling towards the Offender. After reconsidering the item f11, the wording and the content did not obviously represent only one factor. Therefore, the researcher dropped this item from the measure.

After trimming the problem items, the CFA of the retained 16-item, 4 factor model of forgiveness, 5 items for Overcoming Negative Thought and Feeling towards the Offender, 3 items for Seeking to Understand the Offender's Reasons, 4 items for Fostering Positive Approaches towards the Offender, and 4 items for Belief in the Benefit of Forgiveness, showed a reasonable fit. Though there was a significant chi-square value ($\chi 2 = 293.33$, $df = 98$, $p < .01$), however, the chi-square is sensitive to large sample sizes. The researcher assessed other indices of fit: the NC = 2.9 indicated a good fit; the incremental fit indices showed good fit, CFI = .96 and NNFI = .96; RMSEA = .077 indicated an acceptable fit and 90 percent confidence interval for RMSEA ranged between .066 to .088 indicating a mediocre fit of the model to the data. The composite reliability for Overcoming Negative Thought and Feeling towards the Offender is .80, for Seeking to Understand the Offender's Reasons is .79, for Fostering Positive Approaches towards the Offender is .86, and for Belief in the Benefit of Forgiveness is .90, showing good reliability of the measures. The graphic representation of the adjusted measurement model of forgiveness with standardised parameter estimates is illustrated in figure 6.6.

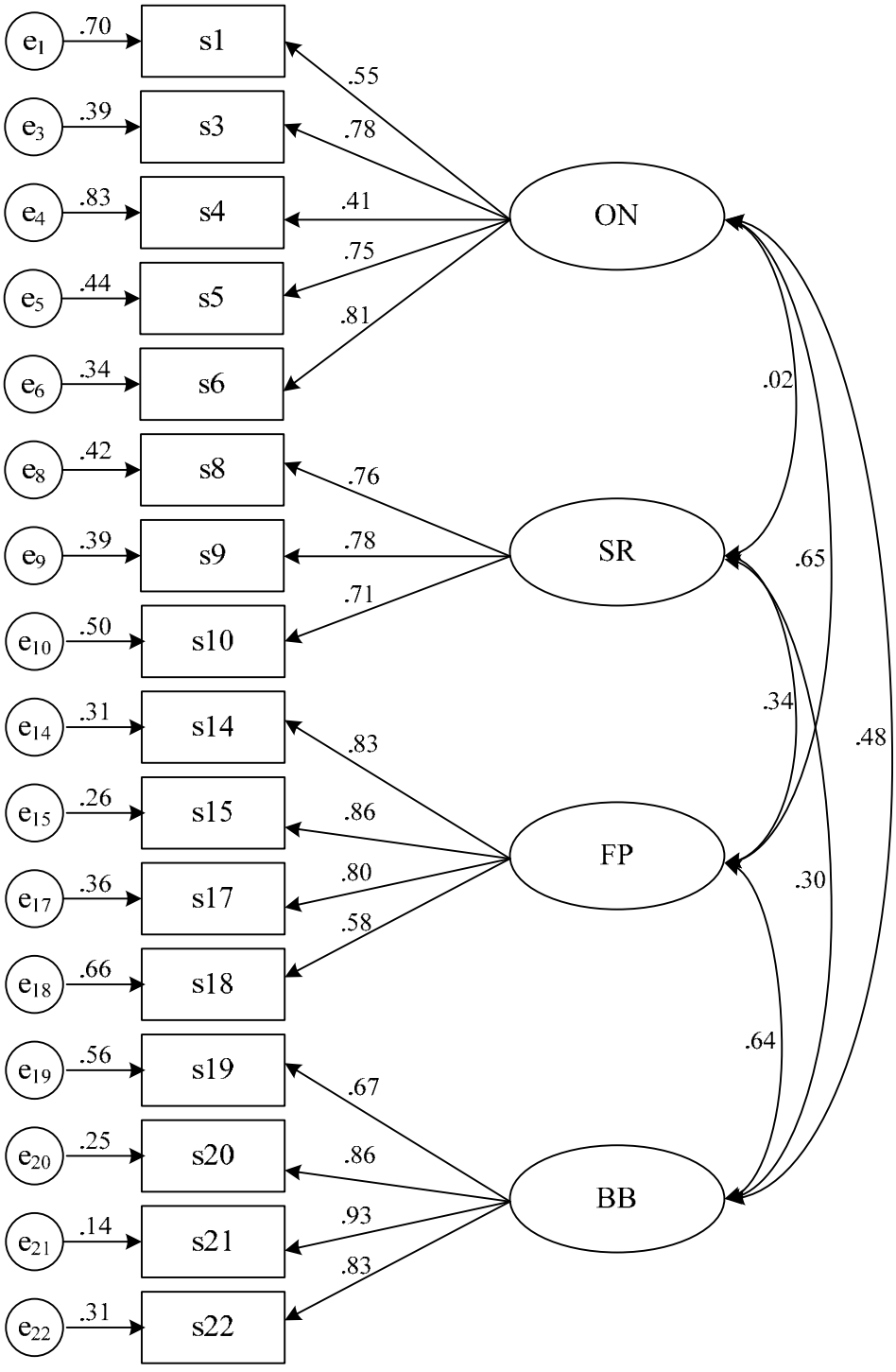

Figure 6.6. Retained 16-item, 4 factor model of forgiveness construct.

The Findings of Structural Model Analysis

After the analyses of the measurement models were examined, the structural model which represents the relations among the latent variables included in the hypothesised model were investigated (Byrn, 2010). This step revealed the overall goodness of fit between the proposed model and the empirical data collected from the respondents, and the parameter estimates which illustrated the direct or indirect effect of the particular latent variables on the other latent variables were revealed. This procedure allowed the hypothesis to be tested.

Symbol notations and specification in the structural model. One of the advantages of SEM is the illustration of schematic representation of the model which offers a graphic portrayal of the hypothesised relationships among the variables under study (Byrn, 2010). From the hypothesised model shown in figure 6.7, the configurations were described as follows:

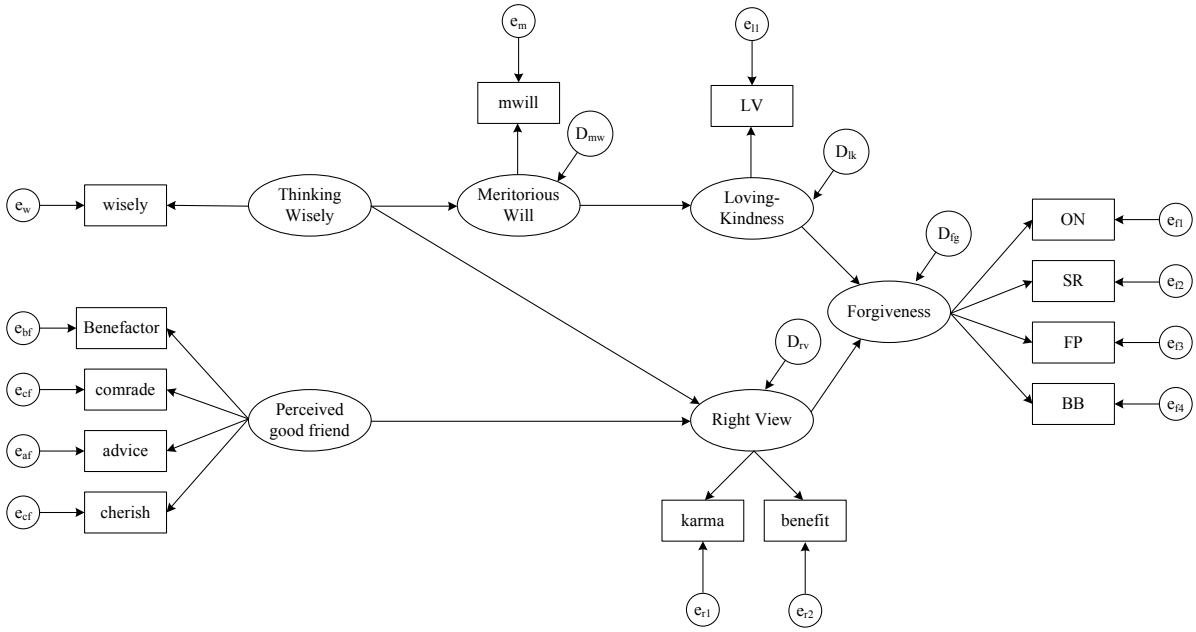

Figure 6.7. The hypothesised model in this study.

Symbol notation	***Description***
	Latent variable
	Observed variable
	Path coefficient, impact of one variable on another

Symbol notation	*Description*
	Covariance or correlation between a pair of variables
	Measurement error associated with an observed variable
	Disturbance or residual in regression, represents all causes of an endogenous variable which are excluded from the model
LV	Single observed variable of loving-kindness
karma	Understanding behaviour in accordance with Karma, observed variable of right view
benefit	Understanding behaviour in accordance with beneficial view, observed variable of right view
mwill	Single observed variable of meritorious will
wisely	Mundane thinking wisely, single observed variable of thinking wisely
benefactor	Benefactor friend, observed variable of perceived good friend
comrade	Comrade friend, observed variable of perceived good friend
advice	Advisory friend, observed variable of perceived good friend
cherish	Cherished friend, observed variable of perceived good friend
ON	Overcoming negative thought and feeling towards the offender, observed variable of forgiveness
SR	Seeking to understand the offender's reasons, observed variable of forgiveness
FP	Fostering positive approaches towards the offender, observed variable of forgiveness
BB	Belief in the benefits of forgiveness, observed variable of forgiveness

From the hypothesised model illustrated above, there are six latent variables, forgiveness, loving-kindness, right view, meritorious will, thinking wisely, and perceived good friend. Twelve observed variables, which behave like indicators linked to the latent variables were achieved by averaging the items belonging to the factor and coming from the previous measurement model analysis. For example, the mean composite score on the single observed variable of loving-kindness was produced by averaging the score from

item s24, s25, s26, s30, s31, s33, s34, and s37. As a result, four observed variables were considered to measure forgiveness (ON; SR; FP; BB), one observed variable was considered to measure loving-kindness (LV), two observed variables were identified to measure right view (karma; benefit), one observed variable was linked to measure meritorious will (mwill), one observed variable was identified to measure thinking wisely (wisely), and four observed variables were considered to measure perceived good friend (benefactor; comrade; advice; cherish). The error terms associated with each observed variable were also included signified by the "e" notation.

The structural associations of all six latent variables, of which thinking wisely and perceived good friend were exogenous variables and the rest of the latent variables were endogenous variables, were identified with six path coefficients examining the hypothesis proposed. These path coefficients could be categorised as two paths of association. First is the loving-kindness process which represented three path coefficients (loving-kindness →forgiveness; meritorious will → loving-kindness; thinking wisely → meritorious will). Second is the wisdom process which represented three path coefficients (right view → forgiveness; thinking wisely → right view; perceived good friend → right view). Moreover, the disturbances or residuals associated with the unexplained variance of the causal variables also were demonstrated as the "D" notation. After the hypothesised model was specified, the next procedures were to examine the overall goodness of fit and the parameter estimates as shown in the section below.

Normality Test. The Existence of non-normality would affect the accuracy of parameter estimation by Maximum Likelihood Estimation on the structural model. The PRELIS programme of LISREL allowed the researcher to determine the skewness and kurtosis of the measured items. All the observed variables of the latent constructs in the structural model were examined for skewness, kurtosis, and skewness and kurtosis combined. The results of the LISREL output showed that the skewness, kurtosis, and the skewness and kurtosis combined of the observed variables were mostly significant ($p < .01$) revealing non-normality existed among the items. Therefore, the transformation of observed variables was undertaken (Tabachnick & Fidell, 2007). The researcher applied the normal scores (NS) method by LISREL to the multivariate dataset (Joreskog & Sorbom, 1999). After transforming the data to normal scores, the skewness, kurtosis, and the skewness and kurtosis combined of the observed variable were corrected.

Table 6.4

Correlation Matrix, Means, and Standard Deviations of the Observed Variables for the Structural Equation Model of Forgiveness Mechanism

Variables	*Mean*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
Forgiveness															
1. ON	3.97	.87	1.00												
2. SR	4.21	.90	0.05	1.00											
3. FP	4.24	.95	0.58**	0.22**	1.00										
4. BB	5.07	.81	0.48**	0.27**	0.57**	1.00									
Loving-kindness															
5. LV	4.63	.83	0.60**	0.12*	0.73**	0.60**	1.00								
Thinking wisely															
6. Wisely	4.97	.63	0.41**	0.28**	0.39**	0.62**	0.48**	1.00							
Right View															
7. karma	4.97	.63	0.15**	0.17**	0.18**	0.44**	0.32**	0.60**	1.00						
8. benefit	4.97	.61	0.32**	0.23**	0.34**	0.53**	0.50**	0.64**	0.65**	1.00					
Meritorious Will															
9. mwill	5.25	.58	0.22**	0.23**	0.23**	0.42**	0.38**	0.59**	0.53**	0.64**	1.00				
Perceived Good Friend															
10. benefactor	4.47	.71	0.23**	0.03	0.15**	0.25**	0.25**	0.33**	0.30**	0.38**	0.29**	1.00			
11. comrade	4.10	.77	0.22**	0.05	0.15**	0.18**	0.19**	0.27**	0.24**	0.29**	0.24**	0.65**	1.00		
12. advice	4.47	.74	0.20**	0.00	0.09	0.18**	0.17**	0.31**	0.33**	0.37**	0.31**	0.61**	0.62**	1.00	
13. cherish	4.35	.82	0.16**	0.02	0.05	0.18**	0.14**	0.28**	0.25**	0.33**	0.26**	0.60**	0.66**	0.73**	1.00

Note: all variables range from 1 to 6, ON=Overcoming negative thought and feeling towards the offender, SR=Seeking to understand the offender's reasons, FP=Fostering positive approaches towards the offender, BB=Belief in the benefits of forgiveness, LV=loving-kindness, Wisely=Mundane thinking wisely, karma=Understanding behaviour in accordance with Karma, benefit=Understanding behaviour in accordance with beneficial view, mwill=Meritorious will, benefactor=Benefactor friend, comrade=Comrade friend, advice=Advisory friend, cherish=Cherished friend, *$p < .05$, **$p < .01$.

Preliminary analysis.Table 6.4 is included to display the mean composite score, standard deviation, and bivariate correlation coefficients of the observed variables included in the structural model of the forgiveness mechanism. The mean composite scores of all observed variables were high, ranging from 3.97 to 5.25. The correlation matrix including the bivariate correlation coefficients among the observed variables revealed that most of the correlation coefficients were statistically significant at .01 level, having 72 out of 78 of parameter estimates. These correlation coefficients ranged from .15 to .73, showing a low through to a high level of correlation among the observed variables. The highest value of the correlation coefficient was .73 between the fostering positive approaches towards the offender and loving-kindness. This value indicated that the problem of multicollinearity among the observed variables had not occurred (Kline, 2005, p. 56). One of the bivariate correlations between the seeking of the offender's reasons and loving-kindness was statistically significant with .05 level (r = .15), showing a low level of association between these two observed variables. Moreover, five out of 78 were not significant and the correlation coefficients were relatively low ranging from .00 to .05. The pattern showed it occurred with the seeking of the offender's reasons and other observed variables such as overcoming negative thought and feeling towards the offender and four observed variables of perceived good friend.

Dealing with latent variables with a single observed variable. Three latent variables in this structural model were specified with their single observed variable, including loving-kindness, meritorious will, and thinking wisely. In the case of the estimation of parameters, the researcher conducted the method of specifying error variance for the measurement model of those latent variables as suggested by Joreskog and Sorbom (1993, p. 37). By deducting the reliability of the single observed variable by 1 and multiplying by the variance of that observed variable, the error variance is identified and it could be used to set the error variance for the measure of the latent variable in LISREL syntax. For loving-kindness, the reliability for LV was .87 and its variance is .682; hence, the error variance is ((1 - .87) x (.682)) = .078. For meritorious will, the reliability for mwill is .90 and its variance is .336; therefore, the error variance is ((1 - .90) x (.336)) = .033. For thinking wisely, the reliability for wisely is .93 and its variance is .403; hence, the error variance is ((1 - .93) x (.403)) = .029.

Testing the overall fit of the hypothesised model. The hypothesised model on figure 6.7 was examined using the LISREL program. The researcher first examined the overall fit of the structural model proposed and this was compared with the set of goodness of fit criteria as shown in table 6.3. The results from the structural analysis of the hypothesised model showed as unacceptable overall fit, identifying that the hypothesised model was not consistent with the empirical data collected from the participants. The fit indices demonstrated a significant chi-square value $\chi 2 = 294.32$, $df = 61$, $p <. 01$; the NC = 4.82 indicating a poor fit; although the incremental fit indices showed acceptable fit, CFI = .93; NNFI = .92, however, the RMSEA = .11 indicated a poor fit. These goodness of fit indices reflected that the structural model should be respecified. The researcher considered the suggestions for model respecification from the modification index coupled with major considerations on the theoretical and conceptual plausibility of any changes. The modification index indicated a high suggestion for respecification for a Beta, path coefficient between meritorious will and right view. Therefore, the researcher was looking for theoretical plausibility for adding this path coefficient. One concept was found as mentioned by Phra Brahmagunabhorn (P.A. Payutto) (2009, p. 16, 490). He stated that, according to Buddhist principles, meritorious will serves as a door or an antecedent of The Five Aggregations of human nature, including corporeality, sensation, perception, mental formation, and consciousness. Right view characterized as a wisdom construct reflecting understanding and belief is one component of this mental formation. Therefore it can be presumed that meritorious will be an antecedent of right view. This is to say that individuals who wish their environment to exist within a state of goodness and wholesomeness may encourage themselves to find a way to attain a right understanding and perspective on the world. As they both referred to a mental state, it can be inferred to the consistency of mental likelihood. Individuals who have the motivation to stay within the existence of wholesomeness also need to pursue their thoughts in a more wholesome direction. For these reasons, the researcher was confident in adding the path coefficient from meritorious will to right view.

After the first analysis, though the chi-square value was reduced; the overall fit of the first adjusted model still had an unacceptable fit, $\chi 2 = 242.07$, $df = 60$, $p < .01$; the NC = 4.03; CFI = .95; NNFI = .93; RMSEA = .096. The final solution was that several error terms of observed variables were allowed to be free. From a final round of analysis, the

adjusted model showed a reasonable fit. There was a significance of chi-square value ($\chi 2$ = 156.19, *df* = 53, $p < .01$), however, the chi-square is sensitive to large sample sizes. The researcher assessed other indices of fit: the NC = 2.9 indicated a good fit; the incremental fit indices showed good fit, CFI = .97 and NNFI = .95; RMSEA = .077 indicated an acceptable fit and 90 percent confidential interval for RMSEA ranged between .063 to .091 indicated a mediocre fit of the model to the data. The adjusted model of forgiveness is presented as follows:

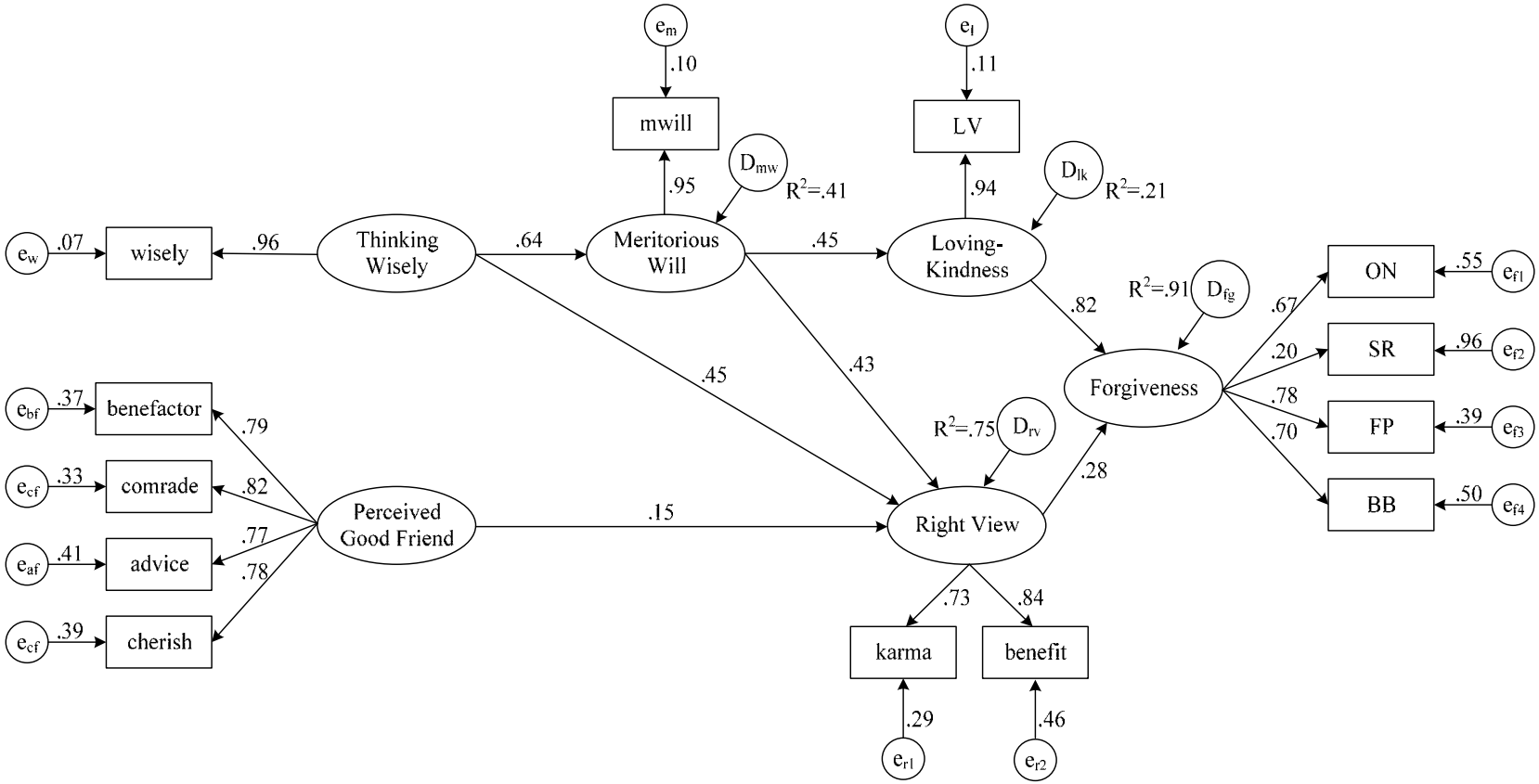

Figure 6.8. The adjusted model of the forgiveness mechanism.

Parameter estimates presented are standardised, all standardised path coefficients are significance at .01 level

Parameter Estimates for the Structural Model. The adjusted model of structural relationships between the latent variables included in the forgiveness mechanism, as presented in figure 6.8, can be illustrated in two parts, the measurement model of each latent variable and the structural relations between the latent constructs. The maximum likelihood estimation of the factor loadings and error variances are presented in Table 6.5. The standardised factor loadings for each latent variable were statistically significant at .01 levels, reflecting evidence of convergent validity from the measurement models in the structural model.

Table 6.5

Maximum Likelihood Parameter Estimates for the Factor Loadings and Error Variances of the Variables in the Structural Model of Forgiveness Mechanism

Parameter	Unst.	*SE*	St.	Unst.	*SE*	St.
Factor loadings				Measurement error variances		
Forgiveness → ON	1.00[a]	-	.67	.39	.03	.55
Forgiveness → SR	.32	.09	.20	.78	.06	.96
Forgiveness → FP	1.27	.10	.78	.33	.03	.39
Forgiveness → BB	1.00	.09	.70	.33	.03	.50
Loving-kindness → LV	1.00[b]	-	.94	.008	-	.11
Right view → Karma	1.00[a]	-	.73	.17	.02	.46
Right view → Goodness	1.12	.08	.84	.11	.01	.29
Meritorious will → Will	1.00[b]	-	.95	.03	-	.10
Thinking wisely → Wisely	1.00[b]	-	.96	.03	-	.07
Good friend → Benefactor	1.00[a]	-	.79	.19	.02	.37
Good friend → Comrade	1.12	.08	.82	.19	.02	.33
Good friend → Advice	1.00	.07	.77	.22	.02	.41
Good friend → Cherish	1.14	.08	.78	.26	.03	.39

Note: Note: Unst. is Unstandardised estimates, SE is Standard error of estimates, St. is Standardised estimates, all parameter estimates are significance at .01 level, a is unstandardised factor loading was fixed to 1 for a unit loading identification constrain, b is error variance specified for a single observed variable.

As a result from the respecification of the hypothesised model related to forgiveness, the adjusted model was estimated and its parameters with maximum likelihood using the LISREL program. This model included the relationships between two paths, loving-kindness and wisdom, as the causal variables of forgiveness as shown in figure 6.8. A tabular summary of the estimated direct, indirect, and total effect or called effects decomposition is shown in table 6.6. The results of the structural relationships will be presented in two parts, direct effect and indirect effect.

Table 6.6

Effect Decomposition for the Structural Equation Model of the Forgiveness Mechanism

	Dependent Variables											
	Meritorious Will			Loving-kindness			Right View			Forgiveness		
Causal Variables	Unst.	*SE*	St.	Unst.	*SE*	St.	Unst.	*SE*	St.	Unst.	*SE*	St.
Thinking wisely												
Direct effect	.56	.04	.64	-	-	-	.33	.05	.45	-	-	-
Indirect effect	-	-	-	.37	.05	.29	.20	.03	.28	.41	.05	.45
Total effect	.56	.04	.64	.37	.05	.29	.53	.04	.73	.41	.05	.45
Perceived Good Friend												
Direct effect	-	-	-	-	-	-	.12	.04	.15	-	-	-
Indirect effect	-	-	-	-	-	-	-	-	-	.04	.02	.04
Total effect	-	-	-	-	-	-	.12	.04	.15	.04	.02	.04

Table 6.6 (continued)

	Dependent Variables											
	Meritorious Will			Loving-kindness			Right View			Forgiveness		
Causal Variables	Unst.	*SE*	St.	Unst.	*SE*	St.	Unst.	*SE*	St.	Unst.	*SE*	St.
Meritorious Will												
Direct effect	-	-	-	.66	.08	.45	.36	.05	.43	-	-	-
Indirect effect	-	-	-	-	-	-	-	-	-	.52	.06	.50
Total effect	-	-	-	.66	.08	.45	.36	.05	.43	.52	.06	.50
Loving-kindness												
Direct effect	-	-	-	-	-	-	-	-	-	.60	.05	.82
Indirect effect	-	-	-	-	-	-	-	-	-	-	-	-
Total effect	-	-	-	-	-	-	-	-	-	.60	.05	.82

Table 6.6 (continued)

	Dependent Variables											
	Meritorious Will			Loving-kindness			Right View			Forgiveness		
Causal Variables	Unst.	*SE*	St.	Unst.	*SE*	St.	Unst.	*SE*	St.	Unst.	*SE*	St.
Right View												
Direct effect	-	-	-	-	-	-	-	-	-	.36	.07	.28
Indirect effect	-	-	-	-	-	-	-	-	-	-	-	-
Total effect	-	-	-	-	-	-	-	-	-	.36	.07	.28
Squared Multiple Correlation (R^2)		.41			.21			.75			.91	

*Note:*Unst. isUnstandardised estimates, SE is Standard error of estimates, St. is Standardised estimates, all parameter estimates are significance at .01 level.

Direct effects. The estimated standardised path coefficient for the direct effects demonstrated the relationships between the latent variables as hypothesised from the literature review. In LISREL, the path coefficient representing a direct effect from exogenous variable to endogenous variable is labeled as gamma (γ) and the path coefficient representing a direct effect from endogenous variable and endogenous variable is labeled as beta (β). For the hypothesis regarding to the role of loving-kindness and its antecedents on forgiveness, all hypotheses were supported. The results indicated that loving-kindness had a statistically significant direct effect on forgiveness (standardised β = .82, $p < .01$), which supports hypothesis 1. For hypothesis 2, the results showed that the path coefficient from meritorious will to loving-kindness was statistically significant (standardised β = .45, $p < .01$). Moreover, thinking wisely had a statistically significant direct effect on meritorious will (standardised γ = .64, $p < .01$), supporting hypothesis 3.

For the hypothesis regarding the role of the wisdom process, which referred to the right view and its antecedents, on forgiveness, all the hypotheses were supported. The findings indicated that right view had a statistically significant direct effect on forgiveness (standardised β = .28, $p < .01$), which supports hypothesis 4. The results also showed that the path from perceived good friend to right view was statistically significant (standardised γ = .15, $p < .01$), supporting hypothesis 2. The results also indicated that thinking wisely had a statistically significant direct effect on right view (standardised γ = .45, $p < .01$), which supports hypothesis 6. Furthermore, as a result of the respecification of the hypothesised model, the findings showed that meritorious will had a statistically significant direct effect on right view (standardised β = .43, $p < .01$).

Indirect effects. These effects are those associations which concern the order of the relationships with at least one mediator involved (Hair et al., 2006). Indirect effect (*IE*) can be calculated by multiplying direct effects in the line of causal relationships and is interpreted as a path coefficient (Kline, 2005). The findings showed that the standardised indirect effect of meritorious will on forgiveness through loving-kindness and right view was statistically significant (standardised *IE* = .50, $p < .01$), showing that forgiveness level is expected to increase in meritorious will of one full standard deviation via its prior effect on loving-kindness and right view. The standardised indirect effect of thinking wisely on forgiveness through meritorious will, loving-kindness, and right view was statistically significant (standardised *IE* = .45, $p < .01$), showing that forgiveness is

expected to increase in thinking wisely by one full standard deviation via its prior effect on meritorious will, loving-kindness, and right view. The standardised indirect effect of thinking wisely on loving-kindness through meritorious will was statistically significant (standardised *IE* = .29, $p < .01$), showing that loving-kindness is expected to increase in thinking wisely by one full standard deviation via its prior effect on meritorious will. The standardised indirect effect of thinking wisely on right view through meritorious will was statistically significant (standardised *IE* = .28, $p < .01$), showing that right view is expected to increase in thinking wisely by one full standard deviation via its prior effect on meritorious will. Finally, the standardised indirect effect of perceived good friend on forgiveness through right view was statistically significant (standardised *IE* = .04, $p < .01$), showing that forgiveness is expected to increase in perceived good friend by one full standard deviation via its prior effect on right view.

Squared multiple correlations (R^2). This value illustrates the proportion of variance explained in the endogenous variable by its causal variables (Schreiber et al., 2006). The R^2 of the four endogenous latent variables (ie., meritorious will, loving-kindness, right view, and forgiveness) in the forgiveness mechanism model are shown in table 6.6. These values referred to the total variance of an endogenous latent variable explained by all the relevant causal variables. The findings demonstrated that thinking wisely explained 41 percent of the variance in meritorious will. The 21 percent of the variance in Loving-kindness was explained by thinking wisely and meritorious will. Moreover, 75 percent of the variance in right view was explained by thinking wisely, perceived good friend, and meritorious will. Finally, all five causal variables, thinking wisely, perceived good friend, meritorious will, loving-kindness, and right view explained 91 percent of the variance in forgiveness. In table 6.7, the researcher presents the summary of the findings from the hypotheses testing on this study.

Table 6.7

Summary of the Hypothesis Testing

	Hypothesis	Supported for the sample
H1	Loving-kindness has a positive direct effect on forgiveness.	Yes
H2	Meritorious will has a positive direct effect on loving-kindness.	Yes
H3	Thinking wisely has a positive direct effect on meritorious will.	Yes
H4	Right view has a positive direct effect on forgiveness.	Yes
H5	Perceived good friend has a positive direct effect on right view	Yes
H6	Thinking wisely has a positive direct effect on right view	Yes

Discussion

Unlike the western published research related to forgiveness, this study incorporated the religious perspective where Buddhist principles were applied to examine the role of loving-kindness and wisdom process on the forgiveness mechanism. The researcher addressed the role of this religious factor on forgiveness regarding work-related offenses. Nurses were the participants of this study due to the salient nature of their work which requires high levels of cooperation and where forgiveness is used as a constructive strategy to maintain their teamwork. Six constructs were included in the hypothesised model representing a path of loving-kindness and a path of wisdom which positively related to an individual's forgiving behaviour towards the offender. Findings from the goodness of fit indices indicated that the adjusted model is acceptable being consistent with the empirical data collected from the participants. The proposed hypotheses were tested and showed that the path coefficients are all statistically significant with .01 levels. The findings from these hypotheses are discussed, and this is

followed by the implications for forgiveness interventions and implications for future research.

The first hypothesis addressed the positive direct influence of loving-kindness on forgiveness. The findings showed a high level of positive path coefficient from loving-kindness to forgiveness. This means that the more victims give loving-kindness towards their offenders, the more likely forgiveness they were to forgive. This finding is consistent with the Buddhist principle mentioned by Phra Thepweti (P.A. Payutto) (1995) that the success of loving-kindness will result in the relinquishing of vengeance showing an abandonment of negative approach towards the wrongdoer. Also, Phra Brahmagunabhorn (P.A. Payutto) (2009) mentioned that loving-kindness causes individuals to live more altruistically, without the motivation to harm others, and often to have a positive and friendly approach towards others. Moreover, the result is consistent with the role of loving-kindness within Buddhist literature written by H.H. Somdet Phra Nyanasamvara (2008), which elucidates that loving-kindness is seen as the process of loving-kindness practices which aims to relinquish anger defilement. The likelihood of granting forgiveness towards the offender is increased when loving-kindness has been achieved. In the western literature, there is no scientific linkage between loving-kindness and forgiveness; however, if the researcher infers that forgiveness is a kind of positive construct towards others, several research studies showed that loving-kindness could contribute to this positive approach towards others. For example, Hutcherson et al. (2008) found that loving-kindness meditation increased feelings of social connection and positive affect toward others. The finding is also supported by evidence from Otake et al. (2006) that by counting participant's own acts of loving-kindness, they became more kind and grateful. Moreover, if the researcher inferred that empathetic concern (Worthington, 1998) can be characterised as loving-kindness towards others, several western studies also supported this positive relationship between empathy and forgiveness. For examples, Macaskill, Maltby, and Day (2002) found that empathy was positively related to forgiveness of others. Also, Fincham, Paleari, and Regalia (2002) found a positive direct effect of emotional empathy on forgiveness among married couples. Toussaint and Webb (2005) found that empathy was significantly correlated with forgiving behaviour. Therefore, the prior evidence in the western literatures discussed above can be inferred to support the positive relationship between loving-kindness and forgiveness.

The second hypothesis represented the proximal antecedent of loving-kindness. The researcher expected that meritorious will would have a positive direct effect on loving-kindness. This hypothesis was supported implying that participants who had a wholesome or moral desire for well-being and a good quality of work life, they were likely to grant goodwill, amity, and wish to help others attaining benefit and happiness. This finding confirmed the prior Buddhist principle of emotional development as stated by Phra Brahmagunabhorn (P.A. Payutto) (2008). He explained the development of positive emotion towards others, or so called external emotional development, by showing that loving-kindness is one of the mental states of social benefactors which is achieved by meritorious will. The linkage between the two constructs is placed in the concept of authentic love (Phra Brahmagunabhorn (P.A. Payutto), 2009), which defines that meritorious will behaves as an antecedent of loving-kindness. Furthermore, the finding about the linkage between meritorious will and loving-kindness can be explained within the western perspective on moral desire proposed by Blasi (2005). From his view, moral desire is the intensity with which individual wish for a moral goal. The strength of one's moral desire determines their level of certainty in attaining moral outcomes. Moral desire is an individual's free will where they consciously present the desire to behave in accordance with the moral self. That is to say, individuals who strongly desire to live within a peaceful and wholesome work environment will express the acts of loving-kindness towards their colleagues who hurt them. This desire for goodness would certainly result in benefits and happiness for other colleagues as a moral goal.

The third hypothesis proposed a positive direct effect of thinking wisely on meritorious will. The researcher expected that thinking wisely would behave as an antecedent of meritorious will. The results showed a path coefficient from thinking wisely to meritorious will that was high and statistically significant. It can be implied that the more individuals reflectively train and concentrate their cognitions on what is the wholesome thing or unwholesome and motivating themselves to follow the moral wholesome perspective, the higher their desire to live with wholesome well-being, thus encouraging their growth, peace, and happiness. The finding is consistent with the concept of a determinant of meritorious will as mentioned by Phra Brahmagunabhorn (P.A. Payutto) (2008). He clarified that thinking wisely plays a role in inducing the way of thinking that, in turn, leads to the prior state of meritorious will. Meritorious will is

achieved by individuals' investigating what is truth, the benefits for life, and the wholesome things in their life. Thinking wisely would reduce the cravings in the mind of the person, and lead to more moral or meritorious will. For the work-related offenses in this study, when the victims were hurt by their colleagues, the feeling of anger and thoughts of revenge would be reduced. This negative thoughts and feelings were products of a craving mind within individuals. If they thoughtfully use the thinking wisely strategy by examining and reflecting on what is the moral right thing to resolve the conflict and which solution will result in the true benefits for their work life, it will strengthen the individuals' intensity on their desire to live and exist with well-being (ie., desire to work in a peaceful workplace, or desire to be more cooperative with others). This meritorious will is incorporated as a positive motivation to behave more benevolently ways towards the wrongdoers.

The fourth hypothesis addressed the positive direct effect of right view on forgiveness. The findings support the role of right view identified from Buddhist wisdom processes on the forgiveness mechanism. The current study revealed that right view had a statistically positively direct effect on forgiveness. It can be implied that the greater the intensity of an individual possession of the right view (ie., understanding properly the law of Karma and understanding properly the behaviours regarding Buddhist morality and ethics), the higher their levels of forgiveness towards the offenders. This finding about the positive role of right view on forgiveness is consistent with what was clearly mentioned by the previous Buddhist literature (Phra Dhammakosajarn (Buddhadasa), 1990; Phra Brahmagunabhorn (P.A. Payutto); 2009; Tiansongjai, 2007) that right view is the major wisdom antecedent which contributes to granting of forgiveness towards the offender. Before achieving forgiveness on the interpersonal issue, an individual should begin with the understanding or belief about the behaviours which result in a good Karma or gaining the benefits for social living. This is also supported by empirical evidence from non Buddhist literatures. When considering the right view's disposition in terms of understanding and believing in the law of Karma, the finding supports the evidence found from the qualitative inquiry from the conceptualisation phase that participant's belief in Karma would encourage the decision to forgive during the reattribution stage. Individuals who understand properly the law of cause and effect in Karma would rather respond in a constructive way instead of restoring justice by taking revenge on their offender, showing

that their belief about life being fair is depended on themselves. It is consistent with the western concept of personal belief in a just world (Dalbert, 2002), which demonstrated that the more individuals believed that they get what they deserve, the less they experience intense feeling of anger. Furthermore, Lucas, Young, Zhdanova, and Alexander (2010) found that self-justice was indirectly positively related to forgiveness. Furthermore, when considering the right view's disposition in terms of understanding and believing what are the good or bad behaviours and how they should behave according to Buddhist morals and ethics, the finding is consistent with several previous non-Buddhist studies which demonstrated the positive relation between religious belief or faith on forgiveness (Rye et. al., 2001; Edwards et al., 2002; Konstan et. al., 2003; Webb et. al., 2005; Brown&Phillips; 2005; Hui et. al., 2006)

The fifth hypothesis was about the external antecedent of right view, perceived good friend. This is when individuals experience alongside the transgression from their colleagues, one source of social support (ie., informational support and emotional support) from their friends or other colleagues. The proper conduct to follow to deal with their offensive event was given to individuals by their friends in order to resolve the problem more constructively. The researcher expected to find a positive direct relationship of perceived good friend on right view. The findings revealed that perceived good friend had a positive direct effect on right view. That is to say, the more individuals were advised and supported by their friends or colleagues, the higher the intensity of their possession of the right view towards the offensive event. This is consistent with the system of Buddhist learning (Chanchamnong, 2003; Phra Brahmagunabhorn, 2004) which addresses the role of having a good friend as the preliminary condition for striving to be a wise person. Individuals who possess the proper understanding and belief with regard to Buddhism are developed by the suggestions and advise of their good friends. Moreover, this is consistent with a western published paper, by Schwartz (2006) which attempted to explore social factors and their effect on religious faith. He found that both perceived faith support from parent and friends positively correlated with the measure of religious belief and commitment. Perceived support from friends played a mediator role in the relationship between perceived support by parent and religious belief and commitment and the friend construct explaining more variance in religious faith than the parent construct.

The last hypothesis was to investigate the internal antecedent of right view, thinking wisely. This construct is referred to as practicing the application of thought, coming to know the correct method of thinking in a systematic and critical manner. This study incorporated the meritorious stimulation method of thinking wisely which was intended to capture the way individuals thoughtfully practice to relinquish and diminish their craving motivation (ie,, negative thought, revenge, or vengeance) towards the offender and the offensive situation. The researcher expected that this kind of thinking wisely would positively directly affect the individual's right view. The findings from the current study showed a positive direct effect of thinking wisely on right view. This means the more individuals used the meritorious method of thinking wisely towards the offensive events, the higher their level of possession of the right view. This is consistent with the concept of the wisdom process stated by Phra Brahmagunabhorn (P.A. Payutto)(2009). He clarified that the mundane right view toward social daily circumstances is achieved by practicing the meritorious stimulation method of thinking wisely. This method aims to eliminate the craving motivation towards others, and lead them to the preparation and disposition of the right view. Several western studies support the findings of a linkage between individuals' critical thinking processes and the possession of a right understanding towards the situation they faced. Takaku (2001) conducted a perspective-taking manipulation on interpersonal forgiveness. He found that the process of taking perspectives, using critical reflection on the offender, helped individuals became more cognizant and understand properly the nature and the causes of being offended. The consequence was an increase in forgiveness towards the offenders. In a broader view of spirituality development, Csikszentmihalyi (1990) proposed that the search and consequent realisation processes contributes to an individual's sense of spiritual cohesiveness which fosters a sense of rightness and well-being, or called wholeness, among them. By attempting to be critically aware of how to fit with the external world, individuals become more consciously aware.

On the basis of the current study, the findings confirm the role of loving-kindness and wisdom processes on the forgiveness mechanism as mentioned by Phra Brahmagunabhorn (P.A. Payutto) (2008a) about the concept of two acts of humans towards others (loving-kindness) and the truth of nature (wisdom process). The structural model of the forgiveness mechanism in this study takes its perspective from Buddhist

principles applying them to explain forgiveness in interpersonal work-related conflicts. The role of religion is also apparent and making a significant contribution to behavioural and social scientists for further research.

CHAPTER 7

CONCLUSIONS AND IMPLICATIONS

This chapter first reviews the purposes, methods, and main findings from the study 1, study 2, and study 3 in the previous chapters. Then, both the implications for development interventions and implications for future research are provided.

Summary of the Study 1

The first study was aimed specifically to conceptualise forgiveness constructs in Thailand, which is the first step in understanding forgiveness in the work context of Thai nurses. The findings from this research are expected to contribute significant knowledge about forgiveness in both Thai culture and work related contexts.

The qualitative method was used to understand and to identify the concepts of forgiveness from the experiences of Thai nurses. The researcher conducted qualitative methodology as recommended by Miles and Huberman (1994), which aims to explain the causality and to investigate to prove that each entity or situation is an example of explanation about forgiveness (Miles & Huberman, 1994). Thirty cases of interviewees were selected from various range of operational units as possible to try to ensure fairy even coverage of private and government hospitals. The researcher constructed an interview schedule following the guidelines in Lawler-Row et al. (2007) which aimed to explore the participants' experiences about the offensive event and forgiveness. The analytic steps employed in this study are consistent with the recommended analytical methods from Miles and Huberman (1994), which suggested that data analysis consists of three flows of activity of case analysis: data reduction, data display, and drawing conclusion and verification. These steps are interrelated and iterative activities. Data reduction is continuous even after the first case was reported from data display. The later iterations of reducing and displaying data still be continued until the preliminary conclusion are drawn presenting the common themes in each case and comparable across cases.

The findings that emerged from this study provide several important insights. The main findings are discussed below: process of forgiveness in a work context, definition of forgiveness.

Process of forgiveness within the work-context. One of the contributions of the present study is the identification of a process model of forgiveness in the workplace. It suggests that this is experienced as a process of forgiveness, arising from the original offensive situations. These conflicts lead to negative thoughts, emotions, and behaviours toward the offender, and victims attempt to use various coping strategies after experiencing the offense. Forgiveness is one of the positive strategies used by victims to maintain a peaceful working life. Moreover, when they decide to forgive offenders, it can affect their later behaviours towards the offender for example by taking steps towards reconciliation. Four stages were emerged in the ongoing process of forgiveness: an experiencing stage, a re-attribution stage, a forgiveness stage, and a behavioural outcome stage.

1) Experiencing stage. This stage refers to the situation that victims face when the offensive events occur in their workplace. These situations are perceived as a condition that can lead to victims feeling that they are being harmed by their colleagues. Offenders' behaviours cause the victims perceptions of being offended, even if the behaviour is voluntary or involuntary. Victims then assess the severity of the offence, within with this stage, negative thoughts and emotions exist towards the offenders. After that, they seek the coping strategies for the conflict situation, and this is a reaction towards the threat.

2) Re-attribution stage. This stage refers to the cognitive process of transformation so as to neutralise negative thoughts, and/or increase more positive thoughts about the offensive event. It is an important phase which leads to forgiving behaviour. After being offended, the range of time taken for re-attribution to occur can vary from a minute to several months; individual's negative thoughts remain as rumination. This repetitive thinking inhibits a positive approach towards the offender. In order to facilitate more constructive thoughts against the conflict, individuals need to change their thinking, so called re-attribution, towards both the offender and the offensive event. This process is influenced by the social/work environment, religious beliefs and values.

3) Forgiveness stage. This stage infers that victims have forgiven their offenders as a result of their re-attributed thoughts. The researcher found that two types of forgiveness emerged from the nurses' experiences. Individuals grant decisional forgiveness and commit to controlling their negative behaviours towards the offenders, and restore the relationship to where it was before the offense occurred. Afterwards, victims attempt to eliminate their negative thoughts and emotions; however, it takes time to change their emotions and their motivation towards their offenders. That is to say, the decision to forgive helps to prevent negative behaviours such as retaliation or continuing the conflict, but the some of the negative emotions such as anger, fear, anxiety, or hurt still remain. Another type of forgiveness, emotional forgiveness, positive emotions reduce or replace the intenseness of negative emotions with positive emotions, for example, empathy, compassion, love, etc. Individuals show completely positive motivation towards their offenders.

4) Behavioural outcome stage. It refers to the victim's behaviours after they had decided to forgive their offender. This stage occurs after the forgiveness stage as the emotions of the forgiver have been transformed into more positive feelings and harmonised with their re-attributed thoughts and this then affects their motivation towards the offenders. As a result, individuals may behave more positively towards the offender in order to maintain their working relationships.

Meaning of forgiveness. The researcher asked each interviewee to define forgiveness in their own terms. From the qualitative analysis, there are five categories of forgiveness definitions, as follows.

Forgiveness is overcoming negative approaches towards the offender. The interviewees indicated that forgiveness was defined in term of overcoming their negative thoughts and emotions towards their transgressors. Forgiveness is an intra-individual process in which individual attempt to cut off or control their potential oppositional acts towards the offender. There are two subcategories found from the coding; overcoming negative thoughts, and overcoming negative emotions.

Forgiveness is an abandonment of negative judgment. The interviewees indicated that forgiveness is a relinquishment of blame towards their offenders. The codes found from participants' forgiveness definitions in this category revealed

interrelationships between codes describing the way to abandon the negative judgment. These codes comprise: seeking to understand the offender's reasons; accepting the offender's mistake; perspective taking; not categorising the offense as a wrongful act; and abandonment of negative judgment.

Forgiveness is to foster positive approaches and loving-kindness towards the offender. Coding from the interviews showed that forgiveness is seen as the promotion or motivation among the victims to approach their offenders in more positive ways, that is to say, they offer loving-kindness towards their transgressors after being hurt. Three subcategories emerged from the interviewees: fostering positive thoughts; fostering positive emotions; and fostering positive acts.

Forgiveness is the awareness of its benefits. The interviewees viewed that awareness of the benefits of forgiveness is part of its definition. Several participants foresaw the end result when they decided to forgive their offenders.

Forgiveness as Buddhist beliefs. When the researcher asked participants to define forgiveness, several did so according to their Buddhist beliefs. Responses from several interviewees represent the Buddhist concept in their utterances, for example, forgiveness as the higher-order merit and forgiveness in the sense of Karma.

Summary of the Study 2

In the second study, the qualitative result from study 2 regards the meanings of forgiveness was applied to this study as a conceptual background to produce the initial items of the forgiveness scale; subsequently, and it was quantitatively examined to determine the underlying factor structure, replicability, and construct validity.

The participants were drawn by cluster random sampling from nurses who worked in Bangkok metropolitan and the surrounding area of around 100 kilometres. The adequate sample size was determined by using five times the number of scale items as suggested by Gorsuch (1983). In this study, the number of items in the initial scale is 40; as a result, the adequate number would be at least 200 participants. After four weeks of data collection, data was obtained from 348 nurses from three hospitals, constituting a good sample size. Data were collected by a package of questionnaires included with: the initial 40 items of the Forgiveness Scale was conducted for an examination of factor

structure of forgiveness; the Forgiveness Scale (Rye et al., 2001), the Heartland Forgiveness Scale (Yamhure-Thompson & Snyder, 2003), and single item of State forgiveness were implemented for the convergent validation; the Willingness to Reconcile Relationship Scale (Tomlinson, Dineen & Lewicki, 2004), the Rumination About an Interpersonal Offense Scale (RIO) (Wade et al., 2008), the revenge subscale of Transgression-Related Interpersonal Motivations Inventory (McCullough et al., 1998), the Forgiveness Scale, and the Heartland Forgiveness Scale (Yamhure-Thompson & Snyder, 2003) were subjected to the nomological validation.

The 40 items of the Forgiveness Scale was quantitatively examined to determine the underlying factor structure by using exploratory factor analysis (Fabrigar et al., 2005). The internal replicability was investigated to indicate the invariance of the factors across the samples (Zientek & Thompson, 2007; Timmerman, Kiers, & Smilde, 2007). Moreover, the construct validation was employed to determine the convergent and nomological validity of the forgiveness construct using other related constructs. (Cronbach & Meehl, 1955; Hair et al., 2006).

This study results in achieving the psychometrically sounded scale designed to measure forgiveness in workplace relationships which will provide the means to address further research regarding forgiveness within the work context. The main findings in this study are presented as follows.

The factor structure of the Forgiveness Scale. A retained 23 items, four-factor underlying structure of forgiveness resulted from an exploratory factor analysis as representing the forgiveness construct empirically identified by Nurses, as Thai layperson within the work situation. There are overcoming negative thought and feeling towards the offender, seeking to understand the offender's reasons, fostering positive approaches towards the offender, and belief in the benefits of forgiveness. This finding confirms the definition of forgiveness emerged from the first study where forgiveness is seen as an individuals' readiness to overcome their negative thoughts and emotions, attempting to relinquish their negative judgment, and instead offering more positive views, feelings, and acts towards the offender.

Internal replicability of the factor structure. Finding from the bootstrapped eigenvalue (Zientek and Thompson , 2007) confirmed the results from EFA, representing

the good replicability of the four factor model of the 23-items of forgiveness scale. Moreover, the researcher followed the approach obtaining bootstrap procrustes confidence interval from Timmerman et al. (2007). Results from 1000 bootstrappings achieved an empirically estimated distribution, where CIs were estimated. The coverage of bootstrap CIs on sample factor loading revealed the stability of the sample estimates across the samples.

Reliability. Results from Cronbach's Alpha coefficients and Raykov's reliability coefficient analysis yielded a satisfactory level of the scale's reliability for its overall scale and for the four subscales.

Convergent validity. The findings showed that the Forgiveness Scale correlated with two standard forgiveness scales, specific-offensive forgiveness (Rye et al., 2001) and dispositional forgiveness (Yamhure-Thompson & Snyder, 2003). This provides initial evidence of the convergent property of the forgiveness scale with the other two psychometrically sound instruments on the forgiveness construct. Moreover, the forgiveness scale also moderately correlated with a single item of state forgiveness representing the consistency between the score on multi-items measure of forgiveness and specific decision on forgiveness towards the offender.

Nomological validity. Evidence from nomological validity reveals the theoretical network of the forgiveness construct. For the first hypothesised model, specific offensive forgiveness, as measured by the 23-items scale, was positively related to dispositional forgiveness. It was positively correlated with willingness to reconcile. Moreover, Forgiveness played the complete mediating role in the relationship between dispositional forgiveness and willingness to reconcile. For the second hypothesised model, the negative relationship found between rumination and forgiveness in the specific offensive event. Forgiveness was then negatively related to intention to seek revenge against the offender. Forgiveness played the partial mediating role in the relationship between rumination and seeking to revenge the offender. Results from the bootstrapping also showed internal replicability thus assuring the stability of the results across the samples.

Summary of the Study 3

The third study demonstrated the role of loving-kindness and wisdom processes on the forgiveness mechanism within a nursing work context. The hypothesised model was specified from the Buddhist literatures from chapter 2 suggesting that the structural relationship of five variables would affect forgiveness on a work-related specific offense, including loving-kindness, right view, meritorious will, thinking wisely, and perceived good friend.

Six hypotheses were proposed to be tested: loving-kindness has a positive direct effect on forgiveness; meritorious will has a positive direct effect on loving-kindness; thinking wisely has a positive direct effect on meritorious will; right view has a positive direct effect on forgiveness; perceived good friend has a positive direct effect on right view; and thinking wisely has a positive direct effect on right view.

The sample was drawn by cluster random sampling from nurses who work in the hospitals in a central area of Thailand under the administration of the ministry of public health. The minimum sample size necessary for the structural equation modelling to examine the hypothesised model in this study was calculated using the procedure as proposed by MacCallum, Browne, and Sugawara (1996) resulting 201 participants minimally required for this study. After a month of data collection, the total participants were 350 nurses from five hospitals. The listwise method was performed to deal with the missing data. Therefore, the final number of participants to be subjected for the hypothesised testing was 333. For the data collections, the researcher originally developed five scales from the literature reviews and theoretical backgrounds of Buddhism, including loving-kindness, right view, meritorious will, thinking wisely, and perceived good friend. Moreover, forgiveness was measured by the 23-items scale of forgiveness which resulted from the quantitative conceptualisation of the forgiveness construct in the study 2. The two-step approach of SEM proposed by Anderson and Gerbing (1988) was applied to this study. The first stage is finding an acceptable measurement model. The researcher first tested measurement models for all of six intended constructs, loving-kindness, right view, meritorious will, thinking wisely, perceived good friends, and forgiveness using confirmatory factor analysis (CFA). Since most of the measurement models were operationalised initially from the Buddhist

concepts, the CFA for scale development was used to assure the prior hypothesis about the relationship of a set of measurement items to their linked factor. CFA can be conducted identifying the individual items which may threaten the dimensionality of the scale, reflecting a poor item and it could be trimmed to gain a better measurement model (Netemeyer et al., 2003). Therefore, in this stage, loading between items and construct's subscales which behaved like latent factors were tested. The second stage, after establishing the measurement model, the structural model of the hypothesised model was examined; parameter estimates and goodness of fit indices are provided.

The findings from this study support the hypotheses about the role of loving-kindness and wisdom processes on forgiveness mechanism, which includes two paths: a loving-kindness path (thinking wisely → meritorious will → loving-kindness → forgiveness); and a path of wisdom (thinking wisely and perceived good friend → right view → forgiveness). After the analyses of measurement model were satisfactory, the hypothesised model was examined. The goodness of fit index revealed the model was not fairly fit the empirical data. Therefore the researcher considered the suggestions for model respecification from the modification index coupled with major considerations on the theoretical and conceptual plausibility of any changes. The respecification was done by adding a path coefficient between meritorious will and right view. The adjusted model showed a satisfactory fit with the empirical data ($\chi 2 = 156.19$, $df = 53$, $p < .01$, NC = 2.9, CFI = .97, NNFI = .95, RMSEA = .077.) revealing the six hypotheses were statistically significant at .01 level, as follows.

For the hypothesis regarding the role of loving-kindness and its antecedents on forgiveness. All hypotheses were supported. The results indicated that loving-kindness had a statistically significant direct effect on forgiveness, which supports hypothesis 1. For hypothesis 2, the results showed that the path coefficient from meritorious will to loving-kindness was statistically significant with .01 level. Moreover, thinking wisely had a statistically significant direct effect on meritorious will, supporting hypothesis 3.

For the hypothesis regarding the role of the wisdom process, which referred to the right view and its antecedents on forgiveness. All the hypotheses were supported. The findings indicated that right view had a statistically significant direct

effect on forgiveness, which supports hypothesis 4. The results also showed that the path from perceived good friend to right view was statistically significant, supporting hypothesis 2. The results also indicated that thinking wisely had a statistically significant direct effect on right view, which supports hypothesis 6. Furthermore, as a result of the respecification of the hypothesised model, the findings showed that meritorious will had a statistically significant direct effect on right view.

Indirect effects. The findings showed that the standardised indirect effect of meritorious will on forgiveness through loving-kindness and right view was statistically significant. The standardised indirect effect of thinking wisely on forgiveness through meritorious will, loving-kindness, and right view was statistically significant. The standardised indirect effect of thinking wisely on loving-kindness through meritorious will was statistically significant. The standardised indirect effect of thinking wisely on right view through meritorious will was statistically significant. Finally, the standardised indirect effect of perceived good friend on forgiveness through right view was statistically significant.

Squared multiple correlations (R^2). The findings demonstrated that thinking wisely explained 41 percent of the variance in meritorious will. The 21 percent of the variance in Loving-kindness was explained by thinking wisely and meritorious will. Moreover, 75 percent of the variance in right view was explained by thinking wisely, perceived good friend, and meritorious will. Finally, all five causal variables, thinking wisely, perceived good friend, meritorious will, loving-kindness, and right view explained 91 percent of the variance in forgiveness.

The vital role of individual's thinking process: **Linkage between the quantitative (study3) and qualitative (study1) findings**

The findings from the current research provided an in-depth understanding of forgiveness within Thai cultural context. Empirical results showed several points derived from the quantitative examination of forgiveness model being linked and consistent with themes emerged from the qualitative case study. These revealed an influence of Buddhism on Thai laypersons' perspective towards the social world.

The finding from the testing of hypothesised model of forgiveness mechanism incorporated by Buddhist principles showed that thinking wisely (Yonisomanasikara) was an antecedent of both loving-kindness and wisdom paths. That is to say individual's thinking wisely is the starting of forgiveness. The more individuals induce themselves to reflectively train and to concentrate their thought or cognition on the wholesome thing and motivate themselves to follow that moral perspectives, the higher their granting of forgiveness towards the offenders and resolving their work-related interpersonal conflict into more constructively. This thinking process is an intra-individual phenomenon which affects an interpersonal circumstance. Individuals have power to control their thought and this thought is later affect their attitude, belief, affects, and behavior towards themselves and others. This quantitative finding is consistent with an important phase, re-attribution stage, emerged from the qualitative analysis in study1. This stage refers to the cognitive process of transformation so as to neutralise negative thoughts and foster more positive thoughts about the offense. Within this stage, individuals need to change their thought called re-attribution. By taking perspective towards both the offender and the offensive situation, individuals were attempting to reframe their views, such as seeking to understand the offender's reason as adopting an empathic approach, do not categorising the offense as a wrongful event, abandoning the negative judgment, comprehending the retaliation is not useful, foreseeing the negative result of holding the grudge, etc. These processes of taking perspective are consistent with the thinking wisely process as stated in Buddhist literatures (Phra Brahmagunaborn (P.A. Payutto), 2009). The researcher could link the role of thinking wisely within the loving-kindness path and wisdom path, as follows.

Within the loving-kindness path, it is focused on the state where individuals are without anger and vengefulness, and wish others attaining the benefits, well-being, and happiness. In order to grant loving-kindness towards others, individuals should behave in term of friendship, goodwill, and empathy. The loving-kindness path is characterised as a positive empathetic approach leading to forgiveness. This path identifies that thinking wisely by encouraging themselves into the moral wholesome perspective would strengthen individual's desire to live with wholesome well-being or called meritorious will. This will would be later fostering the likelihood to grant loving-kindness towards other, especially their offender. The meritorious will and loving-kindness are seen as

positive empathetic constructs displaying the re-attribution of thoughts within the re-attribution stage found from study1.

Within the wisdom path, it is focused on individual possession of the right view towards the offensive event. Individuals who have an understanding properly regards the law of Karma and understanding properly behaviours regards Buddhist morality and ethics would be likelihood to grant a forgiveness towards their offender. Finding from study3 showed thinking wisely play a crucial role as it was an antecedent of the right view. The mundane right view towards social circumstance is achieved by practicing the meritorious stimulation method of thinking wisely. By using this type of thinking wisely, individual would eliminate the revenge motivation towards the offender and lead them to the disposition of the right view toward the interpersonal conflict. The wisdom path presented in study3 is characterised as a process of attaining the proper or constructive belief or world view towards the offense. Thinking wisely is consistent with the taking perspective strategies experiencing by nurses in study1. These are aimed to let the victims awared of the negative outcomes of rumination, including comprehending the retaliation is not just (just resulted by Karma), predicting holding the conflict is not an advantage for themselves, reframing that problem is distant from their own self, etc,. The result of this reframing method would positively contribute to individuals' proper understanding and view towards the offender and the offensive event.

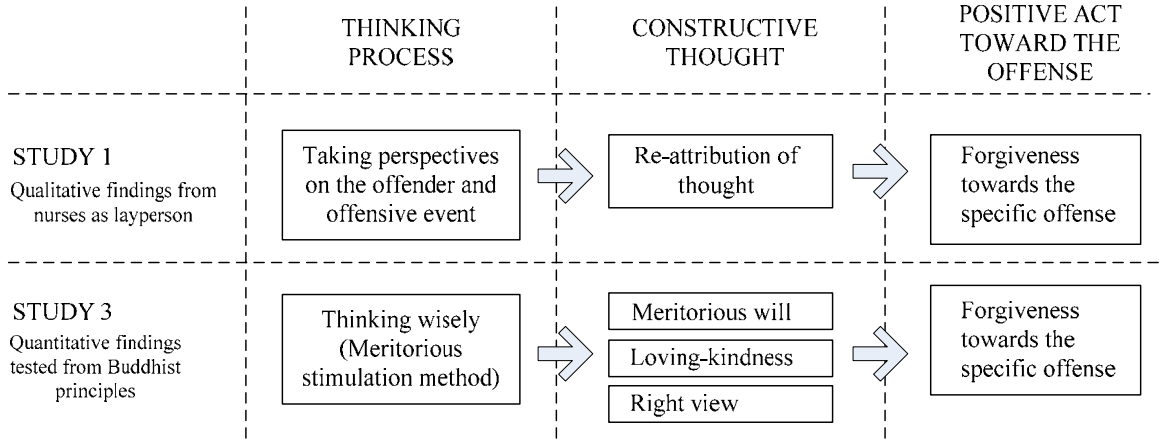

Figure 7.1. The vital role of individual's thinking process: the linkage between study3 and study1.

As shown in figure 7.1, the process of forgiveness derived from the hypothesised model incorporating Buddhist principles and from the nurses as layperson experiences can be illustrated. The term re-attribution of thought coined in the qualitative study and Buddhist positive constructs, for instance meritorious will, loving-kindness, and right view, are all consistent with the constructive thought as influenced by the thinking wisely or perspective taking. This confirms the role of thinking process on individuals' forgiveness.

Implications

The findings from this research provide the noteworthy insights on the construct of forgiveness within Buddhist and work-related perspectives. The implications below are proposed base on the findings from overall research studies in this dissertation.

Implications for Development Interventions

Forgiveness is a significant intra-individual construct when dealing with an interpersonal offense. The findings from the current study reveal that the forgiveness mechanism can be explained by Buddhist principles, showing a strong association between religious belief and value and forgiving behaviour. The role of loving-kindness and wisdom process which are included in the model can be applied by clinicians and human resource developers to design more effective coping strategies for dealing with interpersonal conflict within the workplace. Several suggestions for forgiveness interventions are proposed as follows.

Firstly, from the Buddhist model of forgiveness, loving-kindness plays a major role in an individual's forgiveness. Buddhist principles regarding loving-kindness can be embedded into clinical interventions, such as a psychotherapy and counselling sessions, for clinicians and counsellors. The Buddhist anger management process, called Mettabrahmavihara), is one of the principles aiming to reduce the feeling of anger and vengeance towards the offender (Bhra Brahmagunabhorn (P.A. Payutto), 2007). It can be applied by the counsellors to instruct the victim by directing his or her thought according to the ten steps of cognitive reflection toward the offender, such as the disadvantages of holding the feeling of anger, the negative consequences of anger, the goodness of the offender, the cause and effect of his or her behaviours in response to the offender

(Karma), moral or proper conduct for an interpersonal offense, the positive consequences from granting forgiveness to the offender with the loving-kindness, etc.. Moreover, loving-kindness chanting or meditation is also becoming more recognisable as a religious way to increase the positive approach toward the other.

Secondly, the finding revealed a noteworthy role of Buddhist wisdom process on forgiveness. The linkage between thinking wisely, right view, and forgiveness highlighted that moral or critical reflection regarding the individual's religion is important for the clinicians or counsellors in order to design a cognitive based positive change programme for interpersonal conflict interventions. When individuals are hurt by the wrongdoer, they are generally ruminatively holding an angry and vengeful attitude towards their opponents. One cognitive reframing method proposed from Buddhism for dealing with this negative approach is the meritorious stimulation method of thinking wisely (Phra Sutthivorayan, 2009; PhraBrahmagunabhorn (P.A. Payutto), 2009). The counsellors can apply this method to persuade individuals to focus their cognitive state on what are the wholesome or unwholesome consequences of their behaviours towards the offender, to then induce individuals into the wholesome perspective, and support them to act in constructive ways towards the offenders.

The last three suggestions are recommended for staffs working in human resource management who are finding ways to resolve interpersonal conflict among their employees. The third implication is from the finding that a perceived good friend is an external antecedent of an individual's possession of the right view towards a work-related offensive event; and it had a positive indirect effect on forgiveness. The role of social support from colleagues within the workplace is understandable. Third-party interventions can be designed to encourage forgiveness in the victim of the transgression by promoting the role of colleagues or even supervisors to help the victims to overcome the negative thought and feeling toward the opponents and to support the victims to repair damaged workplace relationships with a more constructive strategy.

The forth implication concerns the promotion of peaceful or forgiving culture within the workplace. The finding in the present study showed that individuals who have a meritorious will or goodness desire are likely to exist within a workplace where peace and cooperation are recognised. One approach acknowledged as the way to promote a

forgiveness culture is social interest intervention (Butler & Mullis, 2001). By activating social interest by an appropriate group process through organisational development, such as the promotion of forgiveness as an interpersonal coping strategy, intergroup team building, and conducting positive communication by an appreciative inquiry process.

Finally, the results show that forgiveness is profoundly incorporated within Buddhist principles. Promoting forgiveness as one of the virtues or moral development programme is essential for character strength development within the workplace. Several interventions can be achieved to attain a healthy positive organization, for example, the organisation's leader promoting a positive climate policy and including forgiveness as an organizational value, including forgiveness in the workplace virtue training and development program, and promoting forgiveness within the team's problem solving strategies.

Implications for Further Research

To our knowledge, the current study is the first study investigating the Buddhist model of the forgiveness mechanism. Forgiveness could be largely explained by the Buddhist constructs related to loving-kindness and the wisdom process. Future research should attempt to strengthen and extend these findings providing more empirical evidence thus avoiding an idiosyncratic result. The researcher recommends a further research, as follows.

Firstly, while our Buddhist hypothesised model in this study enabled us to explain the phenomenon of forgiveness within a work-related offense; however, due to the scope of the current study aiming as it did to investigate the antecedents of forgiveness, the work-related consequences of forgiveness were not include in the model. Therefore, a future study should embrace the linkage between forgiveness and work-related consequences, such as individual well-being, adjustment, prosocial behaviour, job satisfaction, individual performance, and team effectiveness, etc.

Moreover, other work-related populations must be explored for the replicablity and generalisability of this finding within the work context. Future research should be done regarding the stability of the results on different work-related characteristics of the participants. Multi-group analysis provides a comprehensive method to examine an

invariance model of the intended structural model, including forgiveness's factor structure and the Buddhist model of the forgiveness mechanism.

Furthermore, given the high correlation between loving-kindness and forgiveness for this correlational type of study, experimental study on the role of loving-kindness manipulating the individual's forgiving behaviours would provide significant supportive findings for the Buddhist model. Manipulative variables such as loving-kindness chanting, Buddhist anger management process, and loving-kindness embedded with mindfulness meditation should be investigated.

Another finding related to forgiveness, reveals the significant role of constructs in the path of wisdom, thinking wisely, perceived good friend, and right view. Thinking wisely strategy is seen as the most important factor within the Buddhist wisdom process because it is an antecedent of all wisdom variables. Experimental study on the role of thinking wisely manipulation on forgiveness should be employed. It is valuable to provide the empirical evidence those individuals who practice the thinking wisely strategy will increase their right view and the changes in their right view will further change the intensity of forgiveness.

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APPENDICES

LIST OF APPENDICES

Appendix I. Example of descriptive codes generated from the study 1

Codes	TOTALS:	A1	A2	A3	A4	B5	A6	A7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30
abandon of negative judgment	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
abandonment of negative judgement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
accept offender's mistake	6	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	0
age: 31-40 yrs	9	0	1	0	1	0	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1
age: 41-50 yrs	4	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
age: below 30 yrs	16	0	0	0	0	1	0	0	0	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0
age: more than 50 yrs	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
aggressive behaviour	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
awareness of the benefits of forgiveness	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buddhist belief	5	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
causes of being offended: alcohol used of offender	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
causes of being offended: better performance recognition of victim	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
causes of being offended: ineffective profession	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	1	0
causes of being offended: offender's bias	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
causes of being offended: offender's misunderstanding	8	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	1	1	0	0
causes of being offended: perceived injustice of workload of victim	3	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
causes of being offended: performance mistake	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
causes of being offended: snatch victim's task/position	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
causes of being offended: social loafing in group work	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
causes of being offended: uncooperative behaviour of offender	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
causes of being offended: unprompted work behavior of victim	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
causes of being offended: work process incongruence	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
character traits: emotional competence	4	0	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
character traits: individual does not take things seriously	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
character traits: optimism	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
characteristics of offender: good intention towards victim	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
characteristics of offender: nice person	5	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
continuing to act in friendly manner	11	0	1	0	0	0	0	0	0	1	0	0	0	1	3	1	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0
Do not categorise as a wrongful act	8	0	0	1	1	0	1	0	1	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
do not retaliate	2	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Do not ruminate	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
doctor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
empathy	4	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
extent of fg: decisional	23	1	1	1	3	1	0	1	1	2	1	0	1	1	1	0	0	0	1	0	0	1	1	1	1	0	1	0	0	1	1
extent of fg: emotional	9	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	1	1	0	0	0	0	1	0	0	1	0	0
forget about the offense	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
foster positive approaches towards offender	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
foster positive thinking towards offender	11	2	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
Gender: Female	28	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
Gender: male	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
lead to happiness	9	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0	0
let go anger and grudge	14	0	1	0	0	0	1	1	0	1	1	0	1	0	0	0	0	0	1	1	0	1	1	1	1	0	0	1	0	0	1
loving-kindness towards offender	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
negative emotions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
negative thoughts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
offender's bahaviour: uncaring behaviour	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Codes	TOTALS:	A1	A2	A3	A4	B5	A6	A7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30
offender's behaviour: egocentric	3	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
offender's behaviour: repeated offensive behavior	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
offender's behaviour: verbally offend	3	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
offender's behaviours facilitated to fg: apologise	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
offender's behaviours facilitated to fg: good intention towards victim	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
offender's behaviours facilitated to fg: improve more positive behaviour	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
offender's behaviours facilitated to fg: seek to continue relationship	5	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
offender: courier	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
offender: doctor	8	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1	0	0	1	1	0	1	0	0	1	0
offender: government staff	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
offender: lab staff	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
offender: nurse colleague	14	0	0	1	1	1	0	1	1	0	0	0	1	0	0	1	0	1	1	0	0	1	1	0	0	1	0	0	1	0	1
offender: supervisor	4	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Operational unit: Community psychiatry	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Operational unit: critical care unit	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
Operational Unit: Emergency	4	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operational Unit: Inpatient	7	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1
Operational Unit: Internal con..	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operational Unit: Obstetrics u..	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operational Unit: Outpatient service	5	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Operational Unit: Surgery	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
overcome negative approaches towards offender	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
overcome negative thinking towards offender	7	0	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
perceived severity: quite serious	16	1	0	0	0	1	1	0	0	1	1	0	0	0	1	1	0	1	1	0	1	1	1	0	0	1	0	0	1	1	1
perceived severity: quite trivial	7	0	1	0	0	0	0	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
perceived severity: very serious	5	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
perceived severity: very trivial	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
perspective thinking	4	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
positive acts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
positive emotions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
positive feeling	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
positive thoughts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
quality of prior relationship: bad	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
quality of prior relationship: intimate	4	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
rate of fg: 3	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
rate of fg: 5	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
rate of fg: 6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
rate of fg: 7	3	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
rate of fg: 8	8	0	1	0	0	1	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0
rate of fg: 9	14	1	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	1	0	1	1	1	1	0	1	1	0	0
reason why not reconciled: offender is not significance for victim's life	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
reasons to reconcile: a position of lower power than offender	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
reasons to reconcile: future career life	3	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
reasons to reconcile: perceived positive intention from offender	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
reasons to reconcile: teamwork	10	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	1	1	0	1	0	0
reasons to reconcile: work performance	6	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0
reasons why not reconciled: afraid the repeated offense	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
reasons why not reconciled: offender did not know that victim was offen	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
reciprocal forgiveness	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
reconciliation is necessary in work context	23	1	1	1	0	1	1	0	0	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0

Codes	TOTALS:	A1	A2	A3	A4	B5	A6	A7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30
reconciliation is unnecessary	3	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Religiosity: 1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Religiosity: 2	17	1	0	0	1	0	1	0	0	0	0	1	0	1	1	1	1	1	1	0	1	1	0	0	1	0	0	1	1	1	1
Religiosity: 3	6	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0
Religiosity: 4	5	0	0	1	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
religious beliefs/values: accept suffering of life	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
religious beliefs/values: bad emotions cause victim's suffering	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
religious beliefs/values: believe in Karma	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
religious beliefs/values: offender has his/her own Karma	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
religious beliefs/values: practice Dhamma	4	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
renounce negative emotions	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
seek to understand offender's reason	10	2	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0	1
social/work environments: no chance to meet offender again	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
social/work environments: social norm	5	0	2	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
social/work environments: social status	5	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
social/work environments: social support	16	0	0	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	1	1	1	1	2	1	1	1
social/work status of offender: different (higher) professional status	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0
social/work status of offender: senior colleague same profession	9	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	1	1	0	0	0	0	1	1	0	0
social/work status of offender: younger colleague same profession	3	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
tenure: 1-5 yrs	10	0	0	0	0	1	0	0	0	0	1	1	1	1	0	0	1	0	1	0	0	1	1	0	1	0	0	0	0	0	0
tenure: 6-10 yrs	5	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
tenure: less than one year	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
tenure: more than 10 yrs	11	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1
The time will heal the hurt	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
think that anger is not useful	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
time to resolve: a month	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
time to resolve: less than one day	15	1	1	0	0	1	1	0	1	0	1	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	1	0	0	0	0
time to resolve: several months	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
time to resove: a week	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
time to resove: several days	9	0	0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	1	0	1	0	0	1	0	0
type of offense: beneath victim's dignity	7	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0
type of offense: betrayal	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0
type of offense: perceived injustice	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
type of offense: social loafing	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
type of offense: team member mistake	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
type of offense: unfriendly manner	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
type of offense: verbal attack	11	0	1	0	0	0	0	1	1	1	0	1	0	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	0	0	1
type of offense:behaviour is not within expected work norms of behaviou	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
victim's behaviour: apologise to offender	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
victim's behaviour: assertive response to the offender	5	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
victim's behaviour: avoid the offensive situation	9	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	2	1
victim's behaviour: focus on work to avoid thinking of offense	5	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0
victim's behaviour: keep greater distance from offender	9	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	2	1	0	1	0	0	1	0
victim's behaviour: retaliate verbally towards offender	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
victim's behaviour: seek social support	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
victim's behaviour: stay calm	20	1	0	1	0	0	0	0	2	1	1	0	1	3	1	1	1	0	1	0	0	0	0	1	0	2	1	1	0	1	0
victim's emotions: angry	19	1	0	0	0	1	1	1	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0
victim's emotions: disappointed	5	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
victim's emotions: dissatisfied	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
victim's emotions: hurt	6	0	0	1	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Codes	TOTALS:	A1	A2	A3	A4	B5	A6	A7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30
victim's emotions: scare	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
victim's perspectives towards offender: abandon of negative judgment	4	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
victim's perspectives towards offender: continuing his/her working relati	7	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	2	0	0	0
victim's perspectives towards offender: does not categorise as a wrongful	5	0	0	1	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
victim's perspectives towards offender: seek to understand offender's rea	18	1	1	0	0	0	0	0	0	1	0	1	1	0	2	0	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1
victim's perspectives towards the offensive event: conflict would negativ	7	1	0	0	1	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
victim's perspectives towards the offensive event: offense is not a person	4	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
victim's perspectives towards the offensive event: retaliate is not useful	12	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	0	1	0	0	0	1	0	2	1	0	0	0	0	1	2
victim's thoughts: avoid the offensive situation	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
victim's thoughts: decide to forgive	5	0	1	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
victim's thoughts: seek to understand offender's reason	9	1	0	0	2	0	0	1	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
victim's thoughts: think about their previous good relationship with the o	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
victim's thoughts: trying to take the perspective of the offender	3	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
victim's thoughts: unreasonable act of offender	5	0	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
workload: 1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Workload: 3	10	1	0	1	0	0	0	0	0	0	0	1	0	1	1	0	1	1	0	0	0	0	0	1	1	0	1	0	0	0	0	0
Workload: 4	16	0	0	0	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	1	1	1	0	0	0	1	0	0	1	1	1	1
Workload: 5	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
TOTALS:	808	32	34	35	40	24	29	31	26	31	22	22	24	25	28	28	21	22	23	24	25	30	21	30	24	23	23	31	25	28	27

Appendix II. Items on the Forgiveness Scale

Example of scale's instruction (Eng/Thai)

The items of the forgiveness scale were designed to measure forgiveness towards a specific offender within a specific work-related offense. The scale instructed the respondents to choose the answer that best described their thoughts, feelings, and actions towards the person who has hurt or mistreated them in the past by using a Likert-type format with response possibilities ranging from 1(*strongly disagree*) to 6(*strongly agree*). Higher score on this scale represents greater forgiveness towards an offender.

ขอให้ท่าน**นึกถึงประสบการณ์**ที่เกิดขึ้นในการทำงานพยาบาลของท่านที่มีเพื่อนร่วมงานมากระทำไม่ดีต่อท่าน ทำให้ท่านเกิดอารมณ์โกรธ ขุ่นเคืองใจ หรือเมื่อทำงานในโรงพยาบาลหรือหอผู้ป่วย บางครั้งท่านถูกผู้อื่นเช่น เพื่อนร่วมงานพยาบาลด้วยกันเอง หัวหน้างาน นักวิชาชีพอื่นๆ ได้กระทำไม่ดี หรือทำผิดต่อท่าน ทำให้ท่านรู้สึกโกรธหรือขุ่นเคืองใจเป็นอย่างมาก เช่นใช้คำพูดไม่ให้เกียรติท่าน ดุด่าว่ากล่าว กล่าวหาท่านผิดๆ ทำให้คนอื่นเข้าใจท่านผิด หักหลัง นินทา พูดตัดรอนความสัมพันธ์ กระทำการรุกรานทางกายแก่ท่าน จากประสบการณ์ความขัดแย้งเหล่านี้

ขอให้ท่านย้อนนึกภาพถึงเหตุการณ์ที่ท่านคิดว่ายังจำได้ดีชัดเจนที่สุด หรือเกิดขึ้นครั้งล่าสุดที่ท่านประสบมา ให้ท่านพยายามนึกภาพเหตุการณ์นั้นสักครู่ และระลึกถึงสิ่งที่เกิดขึ้นในเหตุการณ์นั้นแล้วตอบคำถามดังต่อไปนี้ โดยให้ท่านเลือกคำตอบข้อใดข้อหนึ่ง และใส่เครื่องหมาย / ในช่องวงกลมที่ท่านคิดว่า**ตรงกับตัวท่าน**มากที่สุดในตอนนี้ โดยให้ท่านเลือกคำตอบว่า ท่านเห็นด้วยในระดับใด จาก 6 ระดับดังต่อไปนี้

1) ไม่เห็นด้วยมากที่สุด	*2) ไม่เห็นด้วย*	*3) ค่อนข้างไม่เห็นด้วย*
4) ค่อนข้างเห็นด้วย	*5) เห็นด้วย*	*6) เห็นด้วยมากที่สุด*

Items of the Forgiveness Scale derived from study2 and study3

(Please note that the 40 items of the initial scale were provided in chapter 5)

Items **(23 items retained from study2: EFA)**	**16 items retained (study3: CFA)**
f1) I no longer hold any grudge against him/her. ฉันไม่นึกเคียดแค้นในสิ่งที่เขาทำไม่ดีต่อฉัน	yes
f2) I cannot stop thinking about how he/she had wronged me.(-) ฉันไม่สามารถหยุดคิดถึงสิ่งที่เขาทำไม่ดีไว้กับฉัน	no
f3) I am still feeling resentful at having been mistreated by him/her.(-) ฉันยังคงรู้สึกขุ่นเคืองในสิ่งที่เขาทำไม่ดีต่อฉัน	yes
f4) I can let go of my anger towards him/her. ฉันสามารถขจัดความโกรธที่มีต่อเขาได้	yes
f5) I feel angry every time I think about how he/she had wronged me. (-) ฉันจะรู้สึกโกรธขึ้นมา เมื่อนึกถึงเหตุการณ์ที่เขาทำไม่ดีต่อฉัน	yes
f6) I feel upset every time I see him/her or even when I think about what had happened.(-) ฉันจะเกิดความรู้สึกไม่พอใจ เมื่อเห็นหน้าเขา และหรือเมื่อนึกถึงเหตุการณ์ที่ไม่ดีนั้น/	yes
f7) I try to think about why he/she had wronged me. ฉันพยายามนึกถึงสาเหตุว่า ทำไมเขาถึงทำไม่ดีต่อฉัน	no
f8) I attempt to understand the reason behind his/her actions. ฉันพยายามทำความเข้าใจถึงเหตุผลที่เขามากระทำไม่ดีต่อฉัน	yes
f9) I think he/she might have his/her own reasons for what he/she had done to me. ฉันคิดว่าเขาคงมีเหตุผลบางประการ ที่ทำให้เขากระทำไม่ดีต่อฉัน	yes
f10) I try to look back on the incident to see if I had done something to upset him/her first and that might be the reason why he/she wanted to hurt me back. ฉันพยายามมองย้อนไปในเหตุการณ์วันนั้นว่า ตนเองได้กระทำอะไรลงไปถึงทำให้เขากระทำไม่ดีต่อฉัน	yes
f11) I continue to think about how he/she had wronged me because he/she is a bad person.(-) ฉันยังคงคิดว่าสิ่งที่เขาทำไม่ดีต่อฉันเพราะว่า เขาเป็นคนนิสัยไม่ดี	no

Items (23 items retained from study2: EFA)	16 items retained (study3: CFA)
f12) I think he/she is just an ordinary person who is likely to make a mistake. ฉันคิดว่าเขาก็เป็นคนธรรมดาคนหนึ่ง ที่มีโอกาสทำผิดพลาดได้	no
f13) I think he/she is a good person although he/she had hurt me in the past. ฉันคิดว่าเขาก็เป็นดีคนหนึ่ง ถึงแม้ว่าเขาจะเคยทำไม่ดีต่อฉันก็ตาม	no
f14) I can see the good side of him/her. ฉันสามารถมองเขาในแง่ที่ดีได้	yes
f15) Although he/she had hurt me before, I still have a good feeling towards him/her. แม้ว่าเขาจะเคยทำไม่ดีต่อฉัน ฉันยังคงมีความรู้สึกที่ดีต่อเขา	yes
f16) I am now friendly to him/her. ณ ตอนนี้ฉันแสดงออกอย่างเป็นมิตรต่อเขา	no
f17) If he/she needs help, I will not hesitate to offer my assistance. ฉันช่วยเหลือเมื่อเขามีปัญหา	yes
f18) When I run into him/her, I try to act as if I did not see him/her.(-) เมื่อพบเขา ฉันพยายามทำเป็นว่าไม่เห็นเขา	yes
f19) It is not beneficial if I still remain unforgiving and hold a grudge against him/her. มันไม่มีประโยชน์อะไรเลย ถ้าฉันยังคงไม่ให้อภัยและเก็บความโกรธไว้ในใจ	yes
f20) I believe that forgiving towards him/her is a highest merit. ฉันเชื่อว่าการให้อภัยแก่เขา เป็นการให้ทานที่ได้บุญสูง	yes
f21) I believe that the best giving is to forgive him/her for what he/she had done to me. ฉันคิดว่าการให้ที่ดีที่สุดคือ ให้อภัยในสิ่งที่เขาเคยกระทำไม่ดีต่อฉัน	yes
f22) I believe that by forgiving him/her, I would find wholesome things in my life. ฉันเชื่อว่าเมื่อให้อภัยเขาไปแล้ว ฉันจะได้พบกับสิ่งที่ดีๆ ในชีวิต	yes
f23) I believe that forgiveness is doing a merit to myself. ฉันเชื่อว่าการให้อภัยเป็นการสร้างกรรมที่ดีต่อตัวฉันเอง	no

Appendix III. Items on the Loving-Kindness Scale

แบบวัดความเมตตา มีลักษณะการตอบเป็นแบบมาตราส่วนประเมินค่า (Likert-Rating Scale) โดยให้ผู้ตอบตอบข้อคำถามที่สะท้อนถึงความคิด การพูดจาปฏิสัมพันธ์ และพฤติกรรมของผู้ตอบที่มีต่อผู้ที่เคยกระทำไม่ดีต่อตนเองในขณะที่อยู่ในที่ทำงาน โดยให้เลือกคำตอบข้อใดข้อหนึ่ง จาก 6 ระดับของคำตอบ โดย ให้พิจารณาว่า ณ ปัจจุบันนี้พฤติกรรมตามข้อคำถามดังกล่าวตรงกับผู้ตอบมากน้อยเพียงใด จากไม่เห็นด้วยมากที่สุด ไปจนถึงเห็นด้วยมากที่สุด การคิดคะแนนตอบไม่เห็นด้วยมากที่สุดคิด 1 คะแนนไปจนถึงเห็นด้วยมากที่สุดคิด 6 คะแนน ดังนี้

ไม่เห็นด้วยมากที่สุด	ไม่เห็นด้วย	ค่อนข้างไม่เห็นด้วย	ค่อนข้างเห็นด้วย	เห็นด้วย	เห็นด้วยมากที่สุด
1	2	3	4	5	6

	The Initial 15 Items (s24 to s38)	**8 items retained (study3: CFA)**
เมตตามโนกรรม (Friendly Thought)		
24.	ฉันอยากจะให้เขาประสบความล้มเหลวในการทำงาน (-)	yes
27.	ฉันคิดว่าเขาก็เป็นเพื่อนร่วมงานที่มีคุณความดีคนหนึ่ง	no
32.	ฉันพยายามทำความเข้าใจเขาว่าเหตุการณ์ดังกล่าว เขาอาจจะไม่ได้ตั้งใจ หรือไม่มีเจตนาร้าย	no
35.	ฉันหวังว่าเพื่อนร่วมงานคนอื่นๆ จะช่วยเหลือและปฏิบัติดีต่อเขาคนนั้น	no
38.	ฉันอยากให้เขามีความสุขในการทำงาน	no
เมตตาวจีกรรม (Friendly Speech)		
25.	ฉันยังคงพูดจาสุภาพกับเขาเหมือนเดิม	yes
28.	บางครั้งฉันนินทาเรื่องเกี่ยวกับเขาคนนั้นกับเพื่อนร่วมงานคนอื่น (-)	no
30.	เมื่อเจอเขาฉันจะพูดกับเขาด้วยน้ำเสียงแข็งกร้าว (-)	yes
33.	ถ้ามีเรื่องใดเป็นประโยชน์ต่อเขา ฉันจะไม่อยากบอกให้เขาทราบ (-)	yes
36.	เมื่อเขาเกิดปัญหาในการทำงาน ฉันจะแนะนำหรือให้ข้อเสนอแนะแก่เขา	no
เมตตากายกรรม (Friendly Act)		
26.	ฉันปฏิบัติงานร่วมกับเขาด้วยไมตรีจิต	yes
29.	เมื่อเขาเกิดปัญหาในการทำงาน ฉันยินดีเข้าไปช่วยเหลือเขา	no
31.	ฉันไม่เข้าไปยุ่งเกี่ยวกับเขาคนนั้นอีกเลย (-)	yes
34.	เมื่อเจอเขาฉันจะพยายามทำเป็นมองไม่เห็นหรือเชิดใส่เขา (-)	no
37.	ฉันยังคงทักทายเขาด้วยสีหน้าที่ยิ้มแย้ม	yes

Please note that, after conducting CFA in study3, the factor structure of the Loving-Kindness Scale revealed a single dimension.

Appendix IV. Items on the Right View Scale

แบบวัดสัมมาทิฏฐิ มีลักษณะการตอบเป็นแบบมาตราส่วนประเมินค่า (Likert-Rating Scale) โดยให้ผู้ตอบตอบข้อคำถามที่สะท้อนถึงความเชื่อ และความคิดเห็นของตนเองที่มีต่อการใช้ชีวิตในสังคมร่วมกับผู้อื่น โดยให้เลือกคำตอบข้อใดข้อหนึ่ง จาก 6 ระดับของคำตอบ โดย ให้พิจารณาว่า ณ ปัจจุบันนี้ข้อคำถามดังกล่าวตรงกับผู้ตอบมากน้อยเพียงใด จากไม่เห็นด้วยมากที่สุด ไปจนถึงเห็นด้วยมากที่สุด การคิดคะแนนตอบไม่เห็นด้วยมากที่สุดคิด 1 คะแนนไปจนถึงเห็นด้วยมากที่สุดคิด 6 คะแนน ดังนี้

ไม่เห็นด้วยมากที่สุด	ไม่เห็นด้วย	ค่อนข้างไม่เห็นด้วย	ค่อนข้างเห็นด้วย	เห็นด้วย	เห็นด้วยมากที่สุด
1	2	3	4	5	6

The Initial 13 Items (d1 to d13)	**12 items retained (study3: CFA)**
ความเชื่อและความเข้าใจว่าพฤติกรรมและผลสืบเนื่องเป็นไปตามกฎแห่งกรรม (Understanding Behaviour in accordance with Karma)	
1. ฉันมองว่าถ้าตนเองทำดีกับคนอื่นๆแล้ว เขาก็ย่อมทำดีตอบกลับฉันเช่นกัน	yes
2. ฉันเชื่อว่าคนที่จะมีความสุขในการทำงานนั้น คือคนที่ปฏิบัติหน้าที่ด้วยความสุจริต ไม่คดโกง	
3. ฉันเชื่อว่าเมื่อได้ทำดีไปแล้ว ย่อมส่งผลดีต่อตัวฉันเองในอนาคต	yes
4. ฉันเชื่อว่าคนที่ทำไม่ดีกับฉัน เขาจะได้รับผลกรรมแก่ตัวเองเขาเอง	yes
5. ฉันเชื่อว่าการที่ตนเองมีชีวิตที่ดีนั้น เพราะว่าการกระทำของตัวฉันเอง	yes
ความเชื่อและเข้าใจถึงพฤติกรรมที่จะเกื้อกูลความดีงามหรือประโยชน์สุขแก่ชีวิตและสังคม (Understanding Behaviour in accordance with Beneficial View)	
6. ฉันมองว่าการแก้แค้นหรือเอาคืนในสิ่งที่คนอื่นมากระทำไม่ดีต่อฉันนั้น เป็นความยุติธรรมที่ทำได้ (-)	yes
7. ฉันเห็นว่าบุญและบาปนั้น ไม่มีอยู่จริง (-)	yes
8. ฉันเชื่อว่าการพูดโกหก บางครั้งก็เป็นสิ่งที่ทำได้เป็นปกติในสังคม (-)	no
9. ฉันเห็นว่าการจะตัดสินว่าทำดีหรือทำชั่ว ขึ้นอยู่กับเจตนา	yes
10. ฉันเห็นว่าความโกรธจะเป็นโทษแก่ตัวฉันเอง	yes
11. ฉันเชื่อว่าการแก้แค้นเอาคืนในสิ่งที่คนอื่นมากระทำไม่ดีต่อตนเอง จะส่งผลไม่ดีคืนกลับมายังฉันเอง	yes
12. ฉันเชื่อว่าการที่ตนเองตั้งใจปฏิบัติหน้าที่ จะส่งผลดีไปถึงผลงานของทีมงาน	yes
13. ฉันเชื่อว่าถ้าฉันละความโกรธและไม่ตอบโต้เพื่อนร่วมงานที่มากระทำไม่ดีต่อฉัน จะทำให้บรรยากาศของทีมงานดีขึ้น	yes

Appendix V. Items on the Meritorious Will Scale

แบบวัดกุศลธรรมฉันทะ มีลักษณะการตอบเป็นแบบมาตราส่วนประเมินค่า (Likert-Rating Scale) โดยให้ผู้ตอบตอบข้อคำถามที่สะท้อนถึงความปรารถนาของตนเองที่มีต่อการใช้ชีวิตในการทำงานร่วมกับผู้อื่น สิ่งแวดล้อมที่ดีในการทำงาน โดยให้เลือกคำตอบข้อใดข้อหนึ่ง จาก 6 ระดับของคำตอบ โดย ให้พิจารณาว่า ณ ปัจจุบันนี้ข้อคำถามดังกล่าวตรงกับผู้ตอบมากน้อยเพียงใด จากไม่เห็นด้วยมากที่สุด ไปจนถึงเห็นด้วยมากที่สุด การคิดคะแนนตอบไม่เห็นด้วยมากที่สุดคิด 1 คะแนนไปจนถึงเห็นด้วยมากที่สุดคิด 6 คะแนน ดังนี้

ไม่เห็นด้วยมากที่สุด	ไม่เห็นด้วย	ค่อนข้างไม่เห็นด้วย	ค่อนข้างเห็นด้วย	เห็นด้วย	เห็นด้วยมากที่สุด
1	2	3	4	5	6

The Initial 8 Items (d17 to d24)	**8 items retained (study3: CFA)**
17. ฉันรักที่จะทำงานบริการหรืองานที่มีโอกาสช่วยเหลือผู้อื่น	yes
18. ฉันชอบทำงานที่ได้พัฒนาตนเองอยู่ตลอดเวลา	yes
19. ฉันปรารถนาที่จะทำงานที่ท้าทายความสามารถของตนเอง	yes
20. ฉันพอใจที่จะทำงานที่ทำให้ตนเองได้ปฏิบัติตนให้เป็นประโยชน์แก่ผู้อื่น	yes
21. ฉันต้องการที่จะทำงานในหน่วยงานที่ทุกคนร่วมมือร่วมใจกัน	yes
22. ฉันอยากที่จะทำงานกับผู้อื่นด้วยความสุขใจซึ่งกันและกัน	yes
23. ฉันปรารถนาที่จะอยู่ในสถานที่ทำงานที่สงบสุข	yes
24. ฉันอยากทำงานในหน่วยงานที่มีความเป็นระเบียบเรียบร้อย	yes

Appendix VI. Items on the Thinking Wisely Scale

แบบวัดโยนิโสมนสิการ มีลักษณะการตอบเป็นแบบมาตราส่วนประเมินค่า (Likert-Rating Scale) โดยให้ผู้ตอบตอบข้อคำถามที่ผู้ตอบพิจารณากลยุทธ์ในการคิดพิจารณาตนเองที่เกี่ยวข้องกับเหตุการณ์ความขัดแย้งหรือเหตุการณ์ที่ตนเองถูกคุกคามนั้น ให้เลือกคำตอบข้อใดข้อหนึ่ง จาก 6 ระดับของคำตอบ โดย ให้พิจารณาว่า ณ ปัจจุบันนี้ข้อคำถามดังกล่าวตรงกับผู้ตอบมากน้อยเพียงใด จากไม่เห็นด้วยมากที่สุด ไปจนถึงเห็นด้วยมากที่สุด การคิดคะแนนตอบไม่เห็นด้วยมากที่สุดคิด 1 คะแนนไปจนถึงเห็นด้วยมากที่สุดคิด 6 คะแนน ดังนี้

น้อยที่สุด	น้อย	ค่อนข้างน้อย	ค่อนข้างมาก	มาก	มากที่สุด
1	2	3	4	5	6

จากเหตุการณ์ที่เพื่อนร่วมงานของท่านคนนั้นทำให้ท่านรู้สึกโกรธหรือรู้สึกว่าตนเองถูกกระทำไม่ดี ณ ปัจจุบันนี้ เมื่อท่านนึกถึงเหตุการณ์ที่ไม่ดีนั้นขึ้นมาอีก ท่านพยายามใช้ความคิดพิจารณาเหตุการณ์ดังกล่าวตามข้อคำถามดังต่อไปนี้ว่าตรงกับตัวท่านอย่างไรบ้าง

The Initial 12 Items (s53 to s64)	**12 items retained (study3: CFA)**
53. ฉันจะพยายามแผ่เมตตาให้เขา	yes
54. ฉันจะชักนำความคิดตนเองไปคิดเรื่องดีๆ เรื่องอื่นแทน	yes
55. ฉันพยายามคิดถึงความดีของเขาที่มีต่อตัวฉันหรือส่วนรวม	yes
56. ฉันพยายามคิดว่าความโกรธหรือความเคียดแค้นจะทำให้สุขภาพจิตของฉันเสียเอง	yes
57. ฉันพยายามคิดว่าถ้ามัวโกรธเขาอยู่ ตัวฉันเองนั่นแหละจะเป็นทุกข์	yes
58. ฉันพิจารณาว่าถ้ามัวแต่คิดซ้ำๆ เกี่ยวกับเหตุการณ์นี้ จะยิ่งทำให้ตนเองไม่มีความสุข	yes
59. ฉันพยายามไม่คิดถึงเหตุการณ์นั้นอีก	yes
60. ฉันจะไม่ใส่ใจถึงรายละเอียดของเหตุการณ์ที่ผ่านมาแล้วนั้น	yes
61. เมื่อรู้สึกว่าตนเองเกิดความโกรธหรือเคียดแค้น ฉันจะพยายามไม่คิดถึงเหตุการณ์นั้น	yes
62. ฉันพิจารณาเหตุการณ์ที่ไม่ดีนั้น เอามาเป็นบทเรียนแก่ตนเอง	yes
63. ฉันพยายามเรียนรู้ว่าความโกรธหรือความเคียดแค้นจากเหตุการณ์นั้น ไม่มีประโยชน์อะไรเลย	yes
64. ฉันคิดพิจารณาพยายามทำความเข้าใจว่าอารมณ์โกรธเกิดขึ้นมาได้อย่างไร และจะจัดการกับความคิด ความรู้สึกหงุดหงิดของตนเองอย่างไร	yes

Appendix VII. Items on the Perceived Good Friend Scale

แบบวัดการรับรู้การมีกัลยาณมิตร มีลักษณะการตอบเป็นแบบมาตราส่วนประเมินค่า (Likert-Rating Scale) โดยให้ผู้ตอบตอบข้อคำถามที่สะท้อนถึงการรับรู้สภาพแวดล้อมของตนเองที่มีเพื่อนรอบข้างในการทำงานที่ดีตามแนวคิดสุหทมิตร 4 โดยให้เลือกคำตอบข้อใดข้อหนึ่ง จาก 6 ระดับของคำตอบ โดย ให้พิจารณาว่า ณ ปัจจุบันนี้ข้อคำถามดังกล่าวตรงกับผู้ตอบมากน้อยเพียงใด จากไม่เห็นด้วยมากที่สุด ไปจนถึงเห็นด้วยมากที่สุด การคิดคะแนนตอบไม่เห็นด้วยมากที่สุดคิด 1 คะแนนไปจนถึงเห็นด้วยมากที่สุดคิด 6 คะแนน ดังนี้

ไม่เห็นด้วยมากที่สุด	ไม่เห็นด้วย	ค่อนข้างไม่เห็นด้วย	ค่อนข้างเห็นด้วย	เห็นด้วย	เห็นด้วยมากที่สุด
1	2	3	4	5	6

ในการใช้ชีวิต ณ ปัจจุบัน เมื่อท่านประสบปัญหาจากการทำงานหรือปัญหาอื่นๆ เพื่อนรอบข้างในสถานที่ทำงานของท่าน ได้แสดงพฤติกรรมตามข้อคำถามดังต่อไปนี้อย่างไรบ้าง

The Initial 12 Items (g1 to g12)	**11 items retained (study3: CFA)**
มิตรอุปการะ (Benefactor Friend)	
1. เขาคอยปกป้องและให้กำลังใจฉัน	yes
2. เมื่อต้องการความช่วยเหลือ เขาจะเข้ามาช่วยฉันทันที	yes
3. เมื่อฉันต้องการคำปรึกษา เขามักจะไม่ค่อยว่าง (-)	yes
มิตรร่วมทุกข์ร่วมสุข (Comrade Friend)	
4. เมื่อฉันมีความยากลำบากหรือเกิดปัญหาขึ้น เขาจะคอยอยู่ข้างๆ ฉัน	yes
5. เขาไม่เคยเอาความลับของฉัน ไปคุยให้คนอื่นฟัง	yes
6. เมื่อเกิดปัญหาในทีมงาน ฉันมักจะต้องเป็นผู้แก้ไขปัญหาเพียงคนเดียว (-)	yes
มิตรแนะนำประโยชน์ (Advisory Friend)	
7. เมื่อฉันคิดจะทำไม่ดี เขาจะห้ามปรามหรือให้สติแก่ฉัน	yes
8. เขาคอยแนะนำถึงพฤติกรรมหรือแนวทางที่ถูกต้องดีงามแก่ฉัน	yes
9. เขาคอยคุยให้ฟังหรือให้ข้อมูลเกี่ยวกับความรู้ใหม่ๆ แก่ฉัน	yes
มิตรมีใจรัก (Cherished Friend)	
10. หากฉันรู้สึกทุกข์ เขาก็พลอยไม่สบายใจไปกับฉันด้วย	yes
11. เมื่อมีคนนินทาหรือให้ร้ายฉัน เขาจะคอยแก้ต่างให้	no
12. เขาแสดงความยินดี เมื่อฉันประสบความสำเร็จ	yes

Appendix VIII. Syntax for the Bootstrapped Eigenvalues

(Zientek & Thompson, 2007)

BFA_1.sps (first SPSS syntax file)

```
set mxloop=50000 results=none highres=off  cache 100000 mprint=off.
set workspace= 100000 compressed=on printback=none.
get file='c:\study2BFA.sav'
/keep=    f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23        .
save outfile='c:\holz.sav'.
get file='c:\holz.sav'.
DATASET name active1.
FACTOR
 /VARIABLES   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23
 /MISSING LISTWISE
 /ANALYSIS   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23
 /PRINT INITIAL EXTRACTION ROTATION
 /CRITERIA FACTORS(4) ITERATE(25)
 /EXTRACTION PC
 /CRITERIA ITERATE(25)
 /ROTATION VARIMAX
 /METHOD=CORRELATION.
dataset close active1 .
execute .
get file='c:\holz.sav'.
dataset name active2 .
numeric seqnum(f1)  .
leave seqnum.
compute seqnum=sum(seqnum,1).
leave seqnum.
execute.
dataset close active2.
save outfile='c:\holz.sav'.
get file='c:\bootfac.sav'.
dataset name active3.
FLIP
```

```
 VARIABLES=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23    .
compute b1=0.
compute b2=0.
compute b3=0.
compute b4=0.
IF (ABS(var001)=max (ABS(var001), abs(var002)  , abs(var003) , abs(var004)  ) ) b1 = 1 .
IF (b1=1 and var001<0) b1=-1.
compute b2=0.
IF (ABS(var002)=max (ABS(var001), abs(var002)   , abs(var003) , abs(var004)  ) ) b2 = 1.
IF (b2=1 and var002<0) b2=-1.
compute b3=0.
IF (ABS(var003)=max (abs(var001), abs(var002)  , abs(var003) , abs(var004)  ) ) b3 = 1.
IF (b3=1 and var003<0) b3=-1.
compute b4=0.
IF (ABS(var004)=max (abs(var001), abs(var002)  , abs(var003) , abs(var004) ) ) b4 = 1.
IF (b4=1 and var004<0) b4=-1.
EXECUTE .
numeric seqnum(f1)  .
leave seqnum.
compute seqnum=sum(seqnum,1).
leave seqnum.
execute.
save /outfile='c:\b1.sav'.
dataset close active3.
execute.
COMMENT Be sure to save the Program II to the correct drive.
COMMENT Following algorithm concatenating bootstrap results contributed by Raynald Levesque.
*//////////////////.
DEFINE !boot (nb=!TOKENS(1))
!DO !cnt=1 !TO !nb
INCLUDE 'c:\BFA_2.sps'.
!IF (!cnt=1) !THEN
GET FILE='C:\brotorig.SAV'.
!ELSE
ADD FILES FILE='c:\Tbrotorig.SAV'
```

```
        /FILE='C:\brotorig.SAV'.
!IFEND
SAVE OUTFILE='c:\Tbrotorig.SAV'.
!IF (!cnt=1) !THEN
GET FILE='C:\eigenvorig.SAV'.
!ELSE
ADD FILES FILE='c:\Teigenvorig.SAV'
        /FILE='C:\eigenvorig.SAV'.
!IFEND
SAVE OUTFILE='c:\Teigenvorig.SAV'.
!DOEND
!ENDDEFINE.
*//////////////////.
*The following macro call will do nb number of resampling.
SET MPRINT=yes.
!boot nb=1000   .
SET MPRINT=no.
COMMENT Mean Bootstrap Results for Factor I.
COMMENT If var1000 corresponds to 1000 loops. If for example 10 loops are run.
COMMENT then change var1000 to var010.
get file='c:\Tbrotorig.sav'.
select if (seqnum=1).
rename variables  col1=col01 col2=col02 col3=col03 col4=col04 col5=col05 col6=col06 col7=col07 col8=col08 col9=col09
col10=col010 col11=col011 col12=col012 col13=col013 col14=col014 col15=col015 col16=col016 col17=col017 col18=col018
col19=col019 col20=col020 col21=col021 col22=col022 col23=col023 .
flip variables=col01 to col023.
compute mfac1=mean(var001 to var1000).
compute sdfac1=sd(var001 to var1000).
compute t_fac1=mfac1/sdfac1.
execute.
save outfile='c:\mfac1.sav'.
COMMENT Mean Bootstrap Results for Factor II.
get file='c:\Tbrotorig.sav'.
select if (seqnum=2).
rename variables  col1=col01 col2=col02 col3=col03 col4=col04 col5=col05 col6=col06 col7=col07 col8=col08 col9=col09
```

```
col10=col010 col11=col011 col12=col012 col13=col013 col14=col014 col15=col015 col16=col016 col17=col017 col18=col018
col19=col019 col20=col020 col21=col021 col22=col022 col23=col023 .
flip variables=col01 to col023.
compute mfac2=mean(var001 to var1000).
compute sdfac2=sd(var001 to var1000).
compute t_fac2=mfac2/sdfac2.
execute.
save outfile='c:\mfac2.sav'.
COMMENT Mean Bootstrap Results for Factor III.
COMMENT If more than three factors add the highlighted section and change seqnum to the.
COMMENT corresponding factor.
get file='c:\Tbrotorig.sav'.
dataset name active6.
select if (seqnum=3).
rename variables  col1=col01 col2=col02 col3=col03 col4=col04 col5=col05 col6=col06 col7=col07 col8=col08 col9=col09
col10=col010 col11=col011 col12=col012 col13=col013 col14=col014 col15=col015 col16=col016 col17=col017 col18=col018
col19=col019 col20=col020 col21=col021 col22=col022 col23=col023 .
flip variables=col01 to col023.
compute mfac3=mean(var001 to var1000).
compute sdfac3=sd(var001 to var1000).
compute t_fac3=mfac3/sdfac3.
execute.
dataset close active6.
save outfile='c:\mfac3.sav'.
get file='c:\Tbrotorig.sav'.
dataset name active6.
select if (seqnum=4).
rename variables  col1=col01 col2=col02 col3=col03 col4=col04 col5=col05 col6=col06 col7=col07 col8=col08 col9=col09
col10=col010 col11=col011 col12=col012 col13=col013 col14=col014 col15=col015 col16=col016 col17=col017 col18=col018
col19=col019 col20=col020 col21=col021 col22=col022 col23=col023 .
flip variables=col01 to col023.
compute mfac4=mean(var001 to var1000).
compute sdfac4=sd(var001 to var1000).
compute t_fac4=mfac4/sdfac4.
execute.
```

```
dataset close active6.
save outfile='c:\mfac4.sav'.
COMMENT Mean Bootstrap Results for Eigenvalues.
get file='c:\Teigenvorig.sav'.
rename variables  col1=col01 col2=col02 col3=col03 col4=col04 col5=col05 col6=col06 col7=col07 col8=col08 col9=col09
col10=col010 col11=col011 col12=col012 col13=col013 col14=col014 col15=col015 col16=col016 col17=col017 col18=col018
col19=col019 col20=col020 col21=col021 col22=col022 col23=col023 .
flip variables=col01 to col023.
compute meigenv=mean(var001 to var1000).
compute sdeigenv=sd(var001 to var1000).
compute t_eigen=meigenv/sdeigenv.
execute.
save outfile='c:\eigenv.sav'.
COMMENT If more than three factors then for each additional factor add (file='c:\mfacnumber.sav') .
COMMENT between file mfac3 and c:eigenv.
COMMENT Then add the corresponding mean sd and t_scores for each factor after t_fac3.
sort cases by case_lbl.
match files
file='c:\mfac1.sav'  /
file='c:\mfac2.sav' /
file='c:\mfac3.sav' /
file='c:\mfac4.sav' /
file='c:\eigenv.sav' /
by case_lbl /
keep=mfac1 sdfac1 t_fac1 mfac2 sdfac2 t_fac2 mfac4 sdfac4 t_fac4 meigenv sdeigenv t_eigen.
execute.
```

BFA_2.sps (first SPSS syntax file)

```
COMMENT This program will be called by Program I.
COMMENT Save as the calling name (indicated in purple) in program I Proceed with the COMMENT indicated changes.
COMMENT Highlighted portions of the program will need to be changed accordingly.
COMMENT Variable Set  Number of Cases  Number of Variables.
COMMENT Variables correspond to the number of factors.
COMMENT Change these according to the given format.
COMMENT NOTE Commas exist between Fact_n
set mxloop=50000 results=none highres=off  cache 100000 compression = on mprint=off .
set printback=none workspace=40000.
get file='c:\holz.sav'.
COMMENT Resample with Replacement.
input program.
loop #i=1 to  348   .
compute seqnum=trunc(uniform(  348  ))+1.
end case.
end loop.
end file.
end input program.
sort cases by seqnum.
match files file=* /tables='c:\holz.sav'/by seqnum.
execute.
save outfile='c:\fact.sav'.
FACTOR
 /MATRIX=OUT (FAC='c:\bootfac10.sav')
 /VARIABLES  f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23
 /MISSING listwise
 /ANALYSIS  f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23
  /PRINT INITIAL EXTRACTION ROTATION
  /CRITERIA FACTORS(4) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(25)
  /ROTATION VARIMAX
  /METHOD=CORRELATION .
```

```
get file='c:\fact.sav'.
correlations variables=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23  /matrix=out('c:\corr2.sav').
get file='c:\corr2.sav'.
SORT CASES BY rowtype_ (A) .
FILTER OFF.
use 1 thru 23 .
EXECUTE .
flip variables=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23.
MATRIX.
get m /variables=var001 to var023 .
print m.
CALL EIGEN(m,A,B).
print B.
COMPUTE B_T=TRANSPOS(B) .
save B_T /outfile='c:\eigenvorig.sav'.
END MATRIX.
get file='c:\b1.sav'.
get file='c:\bootfac10.sav'.
FLIP
  VARIABLES=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 .
RENAME VARIABLES var001=FACT_1 var002=FACT_2  var003=FACT_3  var004=FACT_4.
numeric seqnum(f1)  .
leave seqnum.
compute seqnum=sum(seqnum,1).
leave seqnum.
execute.
sort cases by seqnum.
match files file=* /tables='c:\b1.sav'/by seqnum.
execute.
MATRIX .
GET A/VARIABLES=b1 b2   b3 b4.
GET B/variables= FACT_1 FACT_2   FACT_3 FACT_4.
print B.
print A.
```

```
COMMENT PROCRUSTEAN ROTATION BY BRUCE THOMPSON.
COMPUTE N_A =make(23,1,0).
print N_A.
COMPUTE DIAG_M =make(4,4,0).
PRINT DIAG_M.
COMPUTE N_B=N_A .
PRINT A /
 FORMAT='F8.2' /
 TITLE='First Pattern Matrix (Target)' /
 SPACE=4/
 RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23       /
 CLABELS=Fact_I, Fact_II    , Fact_III, Fact_IV .
COMPUTE A_N=A .
- LOOP #I=1 TO NROW(A) .
-   LOOP #J=1 TO NCOL(A) .
-     COMPUTE A_N(#I,#J)=A(#I,#J) ** 2 .
-   END LOOP .
-END LOOP .
PRINT A_N /
 FORMAT='F8.4' /
 TITLE='First Pattern Matrix (Target) Squared' /
 SPACE=4 /
 RLABELS=  f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23     /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
-LOOP #J=1 TO NCOL(A) .
+ LOOP #I=1 TO NROW(A) .
COMPUTE N_A(#I)=A_N(#I,#J) + N_A(#I) .
+ END LOOP .
-END LOOP .
PRINT N_A /
 FORMAT='F8.3' /
 TITLE='Row Sum of Squares for First Pattern Matrix' /
 SPACE=4 /
 RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 .
LOOP #I=1 TO NROW(A) .
```

```
- COMPUTE N_A(#I) = 1.0 / (N_A(#I) ** .5) .
END LOOP .
PRINT N_A /
 FORMAT='F8.3' /
 TITLE='Normalization Factor for Rows' /
 SPACE=4 /
 RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 .
LOOP #J=1 TO NCOL(A) .
+ LOOP #I=1 TO NROW(A) .
COMPUTE A_N(#I,#J)=A(#I,#J) * N_A(#I) .
+ END LOOP .
END LOOP .
PRINT A_N /
 FORMAT='F8.4' /
 TITLE='First Pattern Matrix (Target) Normalized' /
 SPACE=4 /
 RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
PRINT B /
 FORMAT='F8.2' /
 TITLE='Second Pattern Matrix' /
 SPACE=4 /
 RLABELS=    f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23     /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
COMPUTE B_N=B .
-LOOP #I=1 TO NROW(B) .
+ LOOP #J=1 TO NCOL(B) .
COMPUTE B_N(#I,#J)=B(#I,#J) ** 2 .
+ END LOOP .
-END LOOP .
PRINT B_N /
 FORMAT='F8.4' /
 TITLE='Second Pattern Matrix Squared' /
 SPACE=4 /
 RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23   /
```

```
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
-LOOP #J=1 TO NCOL(B) .
+ LOOP #I=1 TO NROW(B) .
COMPUTE N_B(#I)=B_N(#I,#J) + N_B(#I) .
+ END LOOP .
-END LOOP .
PRINT N_B /
 FORMAT='F8.3' /
 TITLE='Row Sum of Squares for Second Pattern Matrix' /
 SPACE=4 /
 RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23  / .
LOOP #I=1 TO NROW(B) .
- COMPUTE N_B(#I) = 1.0 / (N_B(#I) ** .5) .
END LOOP .
PRINT N_B / FORMAT='F8.3' /
 TITLE='Normalization Factor for Rows' /
 SPACE=4 /
 RLABELS=     f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 .
LOOP #J=1 TO NCOL(B) .
+ LOOP #I=1 TO NROW(B) .
COMPUTE B_N(#I,#J)=B(#I,#J) * N_B(#I) .
+ END LOOP .
END LOOP .

PRINT B_N / FORMAT='F8.4' /
 TITLE='Second Pattern Matrix Normalized' /
 SPACE=4 /
 RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 /
 CLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV.

COMPUTE A_T=TRANSPOS(A_N) .
PRINT A_T / FORMAT='F8.2' /
 TITLE='A_N Transpose' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV /
```

```
 CLABELS=    f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 .
COMPUTE B_T=TRANSPOS(B_N) .
PRINT B_T / FORMAT='F8.2' /
 TITLE='B_N Transpose' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV /
 CLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 .
COMPUTE RI=A_T * B_N .
PRINT RI / FORMAT='F8.3' /
 TITLE='A_N Transpose times B_N' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
COMPUTE RI_T=TRANSPOS(RI) .
PRINT RI_T / FORMAT='F8.3' /
 TITLE='Transpose of (A_N Transpose times B_N)' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV /
 CLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV.
COMPUTE QUAD=RI * RI_T .
PRINT QUAD / FORMAT='F8.3' /
 TITLE='A_N Trans * B_N * Trans of (A_N Trans * B_N)' /
 SPACE=2 /
 RLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
CALL EIGEN(QUAD, EIGVEC, EIG) .
PRINT EIG / FORMAT='F8.3' /
 TITLE='Eigenvalues of QUAD' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II   , Fact_III , Fact_IV .
PRINT EIGVEC / FORMAT='F8.3' /
 TITLE='Eigenvectors of QUAD' /
 SPACE=4 /
 RLABELS=ONE, TWO   , THREE, FOUR /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
```

```
-LOOP #I=1 TO NROW(QUAD) .
+ LOOP #J=1 TO NROW(QUAD) .
COMPUTE EIGVEC(#I,#J)=EIGVEC(#I,#J) * (EIG(#J) ** .5) .
+ END LOOP .
-END LOOP .
PRINT EIGVEC / FORMAT='F8.3' /
 TITLE='Pattern Coefficients of QUAD' /
 SPACE=4 /
 RLABELS=ONE, TWO  , THREE, Four/
 CLABELS=Fact_I, Fact_II    , Fact_III, Fact_IV.
LOOP I=1 TO NROW(EIG) .
- COMPUTE EIG(I)=EIG(I) ** -1.5 .
END LOOP .
PRINT EIG / FORMAT='F8.3' /
 TITLE='Eigenvalues raised to -1.5' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
CALL SETDIAG(DIAG_M,EIG) .
PRINT DIAG_M / FORMAT='F8.3' /
 TITLE='Diagonal Matrix (Eigenvalues raised to -1.5)' /
 SPACE=4 /
 CLABELS=Fact_I, Fact_II    , Fact_III, Fact_IV /
 RLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
COMPUTE VEC_T=TRANSPOS(EIGVEC) .
PRINT VEC_T / FORMAT='F8.3' /
 TITLE='Transpose of Eigenvectors' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV /
 CLABELS=ONE, TWO  , THREE, FOUR.
COMPUTE D=RI_T * EIGVEC .
PRINT D / FORMAT='F9.3' /
 TITLE='D= trans (trans A times B) times Eigenvectors' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV /
 CLABELS=Fact_I, Fact_I   , Fact_III. Fact_IV .
```

```
LOOP J=1 TO NCOL(A) .
- COMPUTE EE=EIG(J) .
- LOOP I=1 TO NCOL(A) .
-   COMPUTE D(I,J)=D(I,J) * EE .
- END LOOP .
END LOOP .
PRINT D / FORMAT='F9.3' /
 TITLE='D = D times Eigenvalues ** -1.5' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV /
 CLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV .
COMPUTE D_T=TRANSPOS(D) .
PRINT D_T / FORMAT='F9.3' /
 TITLE='D transposed' /
 SPACE=4 /
 RLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
COMPUTE C=EIGVEC * D_T .
PRINT C / FORMAT='F9.3' /
 TITLE='Factor Correlations (Cosines)' /
 SPACE=4 / RLABELS=Fact_Ia, Fact_IIa  , Fact_IIIa, Fact_IVa/
 CLABELS=Fact_Ib, Fact_IIb  , Fact_IIIb, Fact_IVb .
COMPUTE C=D * VEC_T .
COMPUTE B_ROT=B * C .
PRINT B_ROT / FORMAT='F8.3' /
 TITLE='B rotated to Best-Fit with A' /
 SPACE=2 / RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23  /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV.
COMPUTE BROT_N=B_ROT .
LOOP #I=1 TO NROW(A) .
-  LOOP #J=1 TO NCOL(A) .
-     COMPUTE BROT_N(#I,#J)=B_ROT(#I,#J) ** 2 .
-  END LOOP .
COMPUTE N_A(#I)= .0 .
END LOOP .
```

```
PRINT BROT_N / FORMAT='F8.4' /
 TITLE='Best Fit Pattern Matrix (Target) Squared' /
 SPACE=4 / RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23   /
 CLABELS=Fact_I, Fact_II  , Fact_III, Fact_IV .
-LOOP #J=1 TO NCOL(A) .
+ LOOP #I=1 TO NROW(A) .
COMPUTE N_A(#I)=BROT_N(#I,#J) + N_A(#I) .
+ END LOOP .
-END LOOP .
PRINT N_A / FORMAT='F8.3' /
 TITLE='Row Sum of Squares for Best Fit Matrix' /
 SPACE=4 / RLABELS=    f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23  / .
LOOP #I=1 TO NROW(A) .
- COMPUTE N_A(#I) = 1.0 / (N_A(#I) ** .5) .
END LOOP .
PRINT N_A / FORMAT='F8.3' /
 TITLE='Normalization Factor for Rows' /
 SPACE=4 / RLABELS=    f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23      / .
-LOOP #J=1 TO NCOL(A) .
+ LOOP #I=1 TO NROW(A) .
COMPUTE BROT_N(#I,#J)=B_ROT(#I,#J) * N_A(#I) .
+ END LOOP .
-END LOOP .
PRINT BROT_N / FORMAT='F8.4' /
 TITLE='Best Fit Pattern Matrix (Target) Normalized' /
 SPACE=4 /  RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23   /
 CLABELS=Fact_I, Fact_II   , Fact_III, Fact_IV .
COMPUTE BROTN_T=TRANSPOS(BROT_N) .
COMPUTE T_M=A_N * BROTN_T .
COMPUTE TEST=DIAG(T_M) .
PRINT TEST / FORMAT='F8.3' /
 TITLE='Test Vector Cosines for Variables' /
 SPACE=4 /  RLABELS=   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 f16 f17 f18 f19 f20 f21 f22 f23 .
SAVE BROTN_T /OUTFILE='C:\brotorig.SAV'.
```

```
END MATRIX .

get file='c:\brotorig.sav'.

dataset name active5 .

numeric seqnum(f1)  .

leave seqnum.

compute seqnum=sum(seqnum,1).

leave seqnum.

execute.

dataset close active5 .

save outfile='c:\brotorig.sav'.
```

Appendix IX. A Mathlab syntax for the Bootstrap Procrustes Confidence Interval (Timmerman, Kiers, & Smilde, 2007)

```
function [Avars,BCAVarci,BCAProci,BCAfpci]=bootpca(X,q,n_boot,CIlevel);
% [Avars,BCAVarci,BCAProci,BCAfpci]=bootpca(X,q,n_boot,CIlevel);
%
% input: X = data matrix
%       q = number of components
%       n_boot = number of bootstraps
%       CIlevel: level of confidence interval, e.g., .95, or .90
%
% pca + varimax + bootstrap via rotation towards full solution
% output:   Avars = normalized Varimax rotated sample solution
%          BCAVarci = boundaries of BCa confidence intervals using Varimax
%          rotation for the bootstrap samples
%          BCAProci = boundaries of BCa confidence intervals using
%          PRocrustes rotation towards the sample solution for the bootstrap samples
%          BCAfpci = boundaries of BCa confidence intervals for proportion
%          of explained variance
% uses otmax.m procr.m permutat.m
q=4
n_boot=1000
CIlevel=.95
[n,j]=size(X);
[R]=corrcoef(X);
[K,L]=ed(R);
A=K(:,1:4)*sqrt(L(1:4,1:4));
fps=(sum(diag(L(1:4,1:4))))./j;
[perm,nperm]=permutat(4);
[Avars,CT]=OTMAX(A,1,1); %Avars: normalized Varimax rotated sample solution
[SE]=asvarse(R,Avars,j,4,n);    %asymptotic standard errors (based on Rosef2.0 (H. Ogasawara))
AAvar=zeros(j*4,1000);
AAproc=zeros(j*4,1000);
fpfp=zeros(1,1000);
```

```
for i=1:1000
 b=ceil(rand(n,1)*n);  % bootstrap sample
 Xb=X(b,:);
 [Rb]=corrcoef(Xb);
 [K,L]=ed(Rb);
 Ab=K(:,1:4)*sqrt(L(1:4,1:4));
 fpb=(sum(diag(L(1:4,1:4))))./j;
 [Avarb,CT]=OTMAX(Ab,1,1); %Avarb: normalized Varimax rotated bootstrap sample solution
 PHI=phi(Avars,Avarb);     %optimale permutatie en reflectie naar  Avars van Avarb
 TR=[];
 for g=1:nperm
    TR=[TR;diag(PHI(:,perm(g,:)))'];
 end;
 [maxPHI,mi]=max(sum(abs(TR)'));
 Avarb=Avarb(:,perm(mi,:))*diag(sign(TR(mi,:)));
 % PCA + rotation towards original solution
 [T,Abproc]=procr(Ab,Avars);  %Orthogonally Procrustes rotates Ab towards Avars
 % collect bootstrap solutions
 AAvar(:,i)=Avarb(:);
 AAproc(:,i)=Abproc(:);
 fpfp(i)=(sum(diag(L(1:4,1:4))))./j;
end;
for i=1:n,
   Xi=[X;X(i,:)];     %dataset expanded to contain the i-th observation twice
   [K,L]=ed(corrcoef(Xi));
   Ai=K(:,1:4)*sqrt(L(1:4,1:4)); %A estimated; (Xsims standardized before analysis
   fpi(1,i)=(sum(diag(L(1:4,1:4))))./j;


   [T,Apv]=procr(Ai,Avars); %Orthogonally Procrustes rotates Ab towards Avars



   [Avari,CT]=OTMAX(Ai,1,1); %Avarb: normalized Varimax rotated bootstrap sample solution
   PHI=phi(Avars,Avari); %towars Avar from Av
   TR=[];
   for g=1:nperm
```

```
        TR=[TR;diag(PHI(:,perm(g,:)))'];
    end;
    [maxPHI,mi]=max(sum(abs(TR)'));
    Avari=Avari(:,perm(mi,:))*diag(sign(TR(mi,:)));
    Avi(:,i)=Avari(:);    %A varimax rotated en optimally permuted and reflected, for 1,...,ns expanded datasets
    Api(:,i)=Apv(:);      %A (orth) procrustes rotated towards Avar
end
%computes Bias corrected CI
[BCAVarci]=BCa(Avars(:),AAvar,Avi,.95);
[BCAProci]=BCa(Avars(:),AAproc,Api,.95);
[BCAfpci]=BCa(fps,fpfp,fpi,.95);
```

Appendix X. List of Content Validation's Experts

For study 2

1. Dr. Leartluk Nuntavisit
2. Dr. Supapak Phetrasuwan
3. Assistant Professor Dr. Wiladlak Chuawanlee

For study 3

1. Associate Professor Dr. Pachongchit Intasuwan
2. Acting Sub Lt. Dr. Manat Boonprakob
3. Assistant Professor Dr. Rattigorn Chongvisal

VITAE

VITAE

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1999	Bachelors of Science (Psychology) (Hons)
	from Faculty of Humanities, Chiang Mai University
2002	Masters of Science (Industrial Psychology)
	from Faculty of Social Science, Kasetsart University
2012	Doctor of Philosophy (Applied Behavioral Science Research)
	from Behavioral Science Research Institute,
	Srinakharinwirot University