This research aimed to study 1) the interaction between psychological factors and social factors associated with behavior of professional competency learning of undergraduate dental students, 2) the power of prediction of psychosocial factors on behavior of professional competency learning of undergraduate dental students and, 3) the relationship between behavior of professional competency learning and happy learning of dental students. The 280 students of the 5th year of undergraduate dental students from academic year 2013 were selected. The variables of the study were behavior of professional competency learning, happy learning, the psychological factors; i.e., adversity quotient, emotional quotient, future-orientation and self-control, and attitudes toward professional competency learning and the social factors; i.e., learning environment, professionalization of dentistry and family support. The instrument used in this study was a 6-rating scale questionnaire with 10 measurements of variables. The reliability of each measurement was between .705 to .914. The data were analyzed and presented by descriptive statistics, Two-Way Analysis of Variance, Hierarchical Multiple Regression Analysis and Pearson’s Product Moment Correlation. The key findings showed in 6 results: 1) The interaction between emotional quotient and learning environment affected behaviors of overall aspect and in 3 specific aspects; i.e., the professionalism, the basic Science, and the clinical skill, of professional competency learning of undergraduate dental students. 2) The interaction between future-orientation and self-control and learning environment affected the learning behaviors in the basic Science and the oral health promotion aspects. 3) The interaction between future-orientation and self-control and professionalization of dentistry affected the learning behaviors in the basic Science knowledge aspect. 4) The interaction between attitudes toward professional competency learning and learning environment affected the learning behaviors in the professionalism and the basic Science knowledge aspect. 5) The 4 psychological factors could increase prediction of the professional competency learning of undergraduate dental students from the 3 social factors in overall and small
aspects about 13.40% to 34.60% with statistically significant at the .05 level. 6) The behavior of competency learning had positive relationship with happy learning with statistically significant at the .05 level.