

## **A Synthesis on Social and Behavioral Science Research Related to Sexual Behavior in 10 Years during 1994-2003 by Using Meta-Analysis**

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### **Background**

From the period of the year 1991 onwards, study issues in social science and behavioral science concerning AIDS has advanced and moved in synchronization with changes in spreads of AIDS. Combined with the policy and political climates which were catalysts for wide-ranging interests in this subject, measures shifted from epidemic control to preventive measures through preservation of human rights, with consideration for factors of social provisions to be involved in solving the problem with public health sector. Revived interest in social factors, sexual values and culture, including patterns of sexual relation in Thais, were revealed and studied extensively: studies on risk behaviors, sexual behaviors in social and cultural contexts of specific groups, e.g. teenage sex, lifestyles, male-female relationship, belief systems and sexual behaviors.

Without understanding on the sources of behaviors, it would not be easy to determine tactical measures associated with socio-cultural dimensions of individual groups, because these conditions are environments that facilitate sexual relation and risk behaviors. Social and behavioral science studies are important to the determination of specific contextual measures for national AIDS prevention and control programs, and to the construction of specific groups' system of active services, which remain to be developed by reliance on social and behavioral science body of knowledge.

The researcher feels that a synthesis review of social and behavioral science body of knowledge concerning sexual behaviors with numerous increased researches in the past 10 years, through

meta-analysis is especially significant. Academics have never before applied this scientific method jointly on synthesis of social and behavioral science researches concerning sexual behaviors. Synthesis of researches through meta-analysis methods produces research synopsis with greater extent and depth than the individual synthesized research works. In addition, the researcher wishes for the development of more systematic, patterned and objective research synthesis methods. Utilization of new synthesis methods on researches in study of research-related documents and in reviews of research works should enhance the social and behavioral science body of knowledge concerning AIDS.

The need for development of synthesis methods on research works is due to the fact that body of knowledge in all science disciplines involves assemblage of past knowledge. Scientific researches are hence researches with precedent knowledge foundation, and researchers must also be able to indicate how the research will complement the existing body of knowledge. If the researcher has synthesized past researches by systematic methods, subsequent researchers will be able to use the research synthesis results as basis and to study additional related research works using the same system, without starting from the first research work. As a result, researchers in all disciplines, especially social- and behavioral science, attempt to develop research synthesis methods that are systematic and objective; so that researchers can synthesize researches consistently.

Another reason is the increased amount of research works. Synthesis of research works using the traditional objective description method is applicable for research works in moderate quantity. But today, substantial increases in research works, along with in advanced computer technology, enable researchers to search and find research reports more conveniently.

### **Research Question**

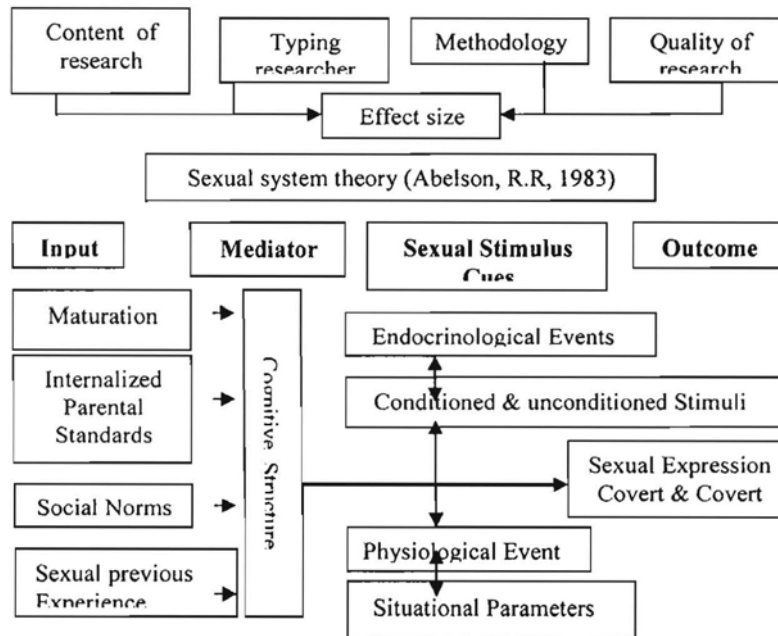
The relationship among bio-social characteristics, socialization, society and culture, psychological-trait characteristics, and environmental contexts affecting sexual behaviors: how much

is the influence? in what direction? and what are deviations attributed to research works characteristics?

### Research Objective

Synthesis of social and behavioral science quantitative research works related to sexual behaviors over the past 10 years during 1994-2003 by Meta-analysis.

### Conceptual Framework



### Effect size

The set of findings included in a meta-analysis must result from comparable research designs for practical reasons as well as conceptual one. Meta-analysis represents each study's finding in the form of effect size. An effect size is a statistic that conducts the critical quantitative information from each relevant study finding.

Different types of study findings generally require different effect size statistics.

#### *Computation and analysis of effect size*

We used product-moment correlation ( $r$ ) effect size estimator in this meta-analysis because of its greater applicability to different type of data. The effect size estimate was calculated directly from chi-square, t-test F-test and Mann – Whitney U statistics from primary study data (Glass, G.V., McGaw, B. and Smith, M.L., 1981). Using Excel and SPSS software.

#### *Finding Reference*

Studies were identified through eight methods:

1. Literature Review: a good source to being with are the references in any existing articles.
2. Reference in studies: This tactic should be used throughout the meta-analysis search.
3. Computerized bibliographic database: searches of selected bibliographic database.
4. Bibliographic reference volumes: a good way to develop a list of keywords for the computer search.
5. Relevant journal: scan through the table of contents and check potentially relevant articles.
6. Conference program and proceeding: identify the research-oriented professional.
7. Authors or experts in the areas of sexual behavior: assistance in identifying nit yet found.
8. Government agency: records on funded research project.

#### **Criteria For Study Inclusion**

Identified studies were included in the meta-analysis if they: Firstly, include sexual behavior outcome such as risky sexual

behavior, preventive sexual behavior and sexual relationship.

Secondly inferential statistic is sufficient for the calculation of effect size. And final, research should be conducted between 1994 – 2003.

The total of 164 articles targeting sexual behavior were identified in the literature search, However, only 65 articles, 39.6 percents of the total articles were used in this study through meta-analysis. Ninety-nine articles were excluded for a variety of reasons.

- (a) 48 articles were eliminate because inconsistent or insufficient data made it difficult to estimate effect size; comprising 27 articles in descriptive research and 21 articles in qualitative research.
- (b) 27 articles were eliminated because no measure of sexual behavior was included in the outcome data – risky sexual behavior, preventive sexual behavior and sexual relationship.
- (c) 24 articles were eliminated because they did not provide sufficient information from which to calculate effect size, reporting only a lack of significance in the test statistic, while some article were out of date.

## Result

**Table 1. Research Characteristic**

Research Characteristics	Number (n=65)	%
Content of research		
Risky sexual behavior	15	23.1
Preventive sexual behavior	9	13.8
Sexual relationship	41	63.1
Typing		
1996 – 2000	28	43.1
2001 – 2003	37	56.9
Researcher		
Master Degree (dissertation)	42	64.6

	Doctoral Degree (dissertation)	7	10.8
	Research report	16	24.6
Methodology			
	Descriptive	15	23.1
	Comparative	22	33.8
	Correlation	28	43.1
Quality of research			
	Very good	37	56.9
	Good	16	24.6
	Fair	12	18.5

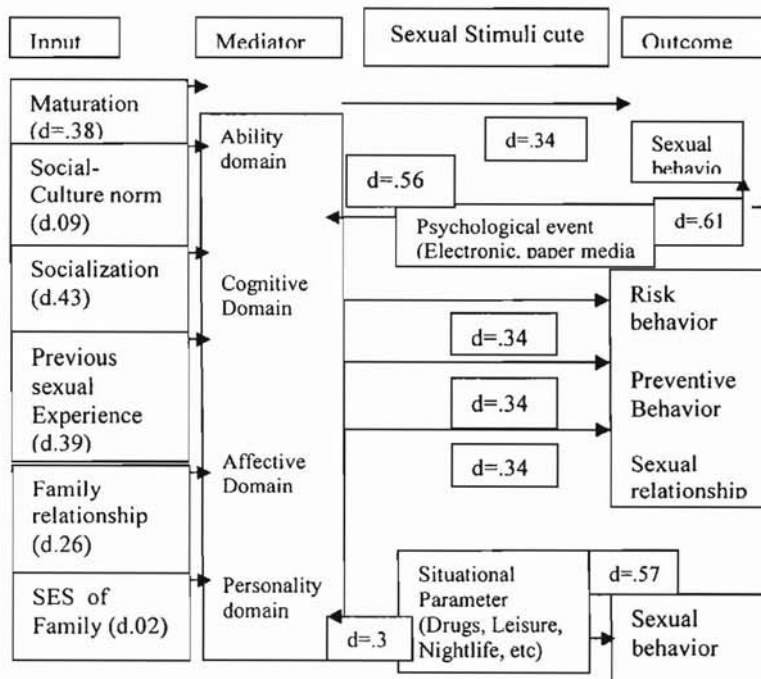
### *Research Characteristics*

From the table, it is found that most of the substantial contents of research works synthesized here were studies on subjects related to sexual relations, followed by risk behaviors to sexually-transmitted diseases and risk behaviors to sexual intercourse. Preventive behaviors to sexually-transmitted diseases and sexual intercourse accounted for only 14%.

More than half of research works synthesized here was done during the year 2001-2003 and almost two-thirds were Master's degree level dissertations and articles. Approximately three-fourths were dissertations at Doctoral and Master's degree levels.

The majority of formats of studies were relationship studies, followed by comparative studies and descriptions or explanations, respectively. Quality of research works synthesized here was performed through research work evaluation questionnaires, evaluated by the researcher; which found that three-fifths of research works to be of excellent quality, one-fifths to be of good quality, and almost one-fifths to be of moderate quality.

**Figure 1- Overall Effect Size**

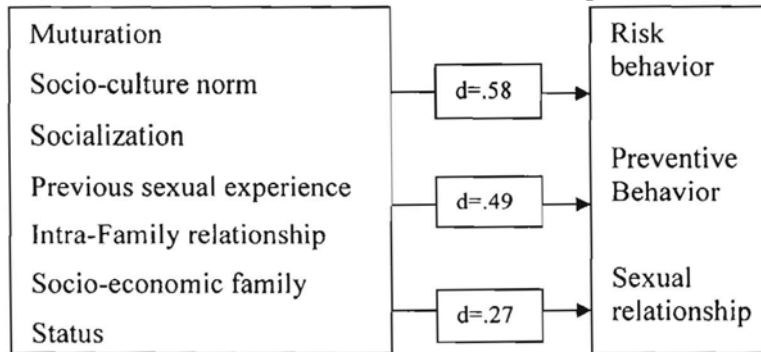


Overall meta-analysis of standard estimation indices, i.e. correlation coefficients, on sexual behaviors found that variables with high averages of effect size on Affective, Cognitive, Ability, and Personality domains in sexual relation were socialization, followed by Previous sexual experiences and Maturation, with similar averages of effect sizes; and Intra-Family relationship, with lower effect size. Significant stimuli on Affective, Cognitive, Ability, and Personality domains were various medias; and other stimuli such as narcotics, leisure, and nightlife etc., with similarly high effect sizes.

As for the average effect sizes of Affective, Cognitive, Ability, and Personality domains on sexual behaviors is .34 overall. When considered separately, it was found that average effect sizes of Affective, Cognitive, Ability, and Personality domains were

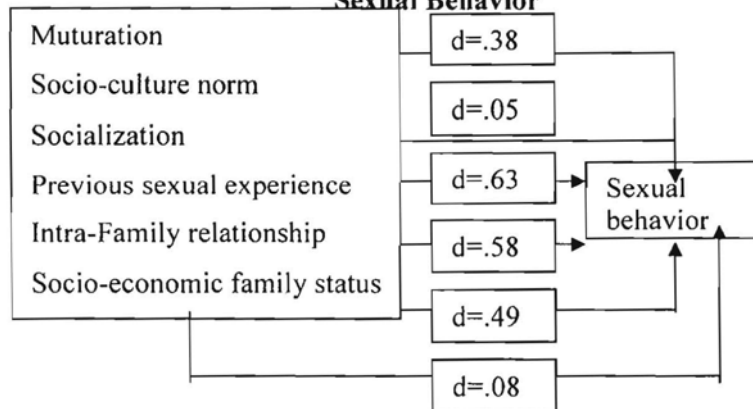
highest on risk-behaviors of sexual intercourse. Preventive behaviors and Inter-sex relationship had similar effect sizes.

**Figure 2 - Effect Size between Input and Risk, Preventive and Sexual Relationship**



Input variables had an overall average effect size on sexual behaviors at .45; with higher average effect sizes on risk-behaviors of sexual intercourse and preventive behaviors. As for Inter-sex relationship had an average effect size of only .27.

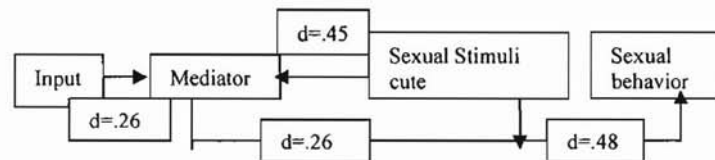
**Figure 3-Effect Size between Input Variable and Sexual Behavior**





In consideration of Input variables' details on sexual behaviors, it was found that socialization had the highest effect size at .58, followed by previous sexual experience, intra-family relationship, and Maturity. Socio-culture norm and family's socio-economic status had low effect sizes.

**Figure 4-Total Effect and Effect Size**



In general, it can be concluded that effect of Affective, Cognitive, Ability, and Personality domains on sexual behaviors is .36 overall, but will be higher when stimulated by stimuli from media, drugs, nightlife, etc.

*Expected Benefits*

The body of knowledge derived from findings in research synthesis will be useful for determination of various intervention measures; and research results will be the basis for more efficient measures. In the past, determination of measures did not involve much benefit of research results as guidelines, resulting in disparity in research works and intervention measures. In addition, researchers can see various concepts and methods used in the researches that can be applied to and develop subsequent researches.

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