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**Sexual Activity among the Older Population in Thailand:
Evidence from a Nationally Representative Survey**

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Sexual Activity among the Older Population in Thailand:
Evidence from a Nationally Representative Survey

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Abstract

This study examines sexual activity among the population aged 50 and over in Thailand in relation to age, gender and health status. It is the first study of older persons based on a large nationally representative survey in any non-Western or developing country. The results indicate that that substantial proportions of older married Thais remain sexually active, although at levels that lower than found among older persons in Western countries. Sexual activity and desire decline steadily with age for both married men and women but at any given age both are lower for women. Overall, the sexual desire of husbands is a far more important determinant of sexual activity within marriage than that of wives. Poor health depresses activity and desire but can not account the decline of either with age. Comparisons of sexual desire and activity reveal that for the majority of older married Thai men and women behavior and desires are concordant. Levels of discordance are higher for married women, however, and arise primarily from being active but lacking desire. Possible reasons for the low activity levels relative to Western countries are considered as are the implications for the AIDS epidemic and for discussions of the quality of life of older persons.

Dataset used: Survey of the Welfare of Elderly in Thailand (SWET)

I. Introduction

Sexual behavior has been one of the more neglected areas of social research (Levy and Albrecht 1989a). Well designed quantitative studies of older adults (defined as aged 50 and over) are particularly uncommon (Levy 1994) and in the case of developing countries are virtually non-existent. In the late 1970s and the 1980s, questions on sexual activity status and coital frequency were included in surveys of reproductive aged women in some developing countries as part of the World Fertility Survey and the Demographic and Health Surveys programs. But not until the worldwide HIV/AIDS pandemic stimulated interest that a series of surveys specifically on sexual matters were launched in a number of developing countries, under sponsorship of the World Health Organization (Carballo 1995; Cleland and Way 1994; Merson 1995; Spira et al. 1998). However, these surveys typically targeted adults under age 50 leaving the situation relating to older adults in developing countries still unexplored (Ferry et al. 1995).

Formidable methodological challenges are cited as one major reason for the dearth of accurate and unbiased data on older age sexual behavior in general (Kaye 1993; Levy 1994; Levy and Albrecht 1989a and 1989b). In addition, untested assumptions that older persons are largely asexual, and thus that there is little to investigate, further discourages research on the topic (Hodson and Skeen 1994; Kaye 1993; Levy and Albrecht 1989b; Minichiello et al. 1996). Although still minimal, representative quantitative research on sexual activity in the West is beginning to include, and in some instances focus on, the older population (e.g. Braehler and Unger 1994; Call, Sprecher and Schwartz 1995; Delbes and Gaymu 1997; Marsiglio and Donnelly 1991; Minichiello, Plummer and Seal 1996; National Council on the Aging 1998; Stall and Catania 1994). The motivation for such research stems largely from a perspective holding that sexuality and sexual activity remain important aspects of well-being throughout the life course rather than from a primary concern about AIDS. Nevertheless, the importance of considering older persons as part of the population at risk of HIV in the West and the lack of attention given to them in connection with the epidemic has not gone unnoticed (Chiao, Ries and Sande 1999; Feldman 1994; Levy and Albrecht 1989b; Ory, Zablotsky and Crystal 1998; Riley 1989; Stall and Catania 1994; Zelentz and Epstien 1998).

In developing countries, where concern about AIDS is the main motivation underlying the recent studies of sexual behavior, the relatively small share of AIDS cases typically attributable to older adults undoubtedly detracts attention away from sexual activity at later ages. It is premature, however, to discount the risk of HIV infection facing older persons through sexual contact. Given the long latency period of AIDS, substantial numbers of persons who are under 50 at infection may reach the highly infectious symptomatic stages of AIDS after 50.¹ Thus even if key risk behaviors such as commercial sex patronage or intravenous drug use are low after 50, the legacy of earlier activities at younger ages can still be a threat to marital partners after 50. Given the much greater importance of heterosexual transmission in less-developed countries than in the West, information on heterosexual relations among older persons is even more significant with regard to the AIDS epidemic in those contexts (Levy and Albrecht 1989b; UNAIDS/WHO 1998). Such research can have substantial policy relevance by alerting persons involved in intervention programs to the actual levels of sexual activity and risk among older persons and counter potentially false assumptions based on preconceived notions of older age asexuality (Levy and Albrecht 1989a; Sankar et al. 1998).

Besides the programmatic implications for the AIDS epidemic, studies of sexual behavior of older persons in developing countries can also contribute to basic sociological and social demographic research by expanding our understanding of the conceptions of sexuality, aging and gender and how they intersect in those societies. They can also help form a basis for comparative analyses of older age sexual behavior, an approach that some have identified as being essential if we are to achieve a more general understanding of the social patterning of sexuality in human society (Minichiello et al. 1996).

The present study examines sexual activity among the older population in Thailand based on a large representative survey of persons aged 50 and older. The data provide information on both sexual activity and sexual desire for married men and women as well as unmarried men. As far as we are aware, this is the first such study of its kind for any non-Western or developing country. The analytical focus is on the influence of age, gender and health status, all of which have been shown in research for other populations to have important bearing on coital activity and sexual desire.

II. The Thai Setting

The importance of research on sexual activity among the older population in Thailand is enhanced by the fact that the AIDS epidemic there is the most advanced and one of the most severe among Asian nations (UNAIDS/WHO 1998; MAP 1998). Recent estimates indicate approximately 2 percent of the adult population are HIV positive (UNAIDS 1998a). Although incidence has fallen in response to aggressive organized efforts to combat the epidemic (UNAIDS 1998b), projections indicate that deaths will increase for some years to come (NESDB 1994; UN 1999). As in most developing countries, heterosexual intercourse is the overwhelming route of HIV transmission in Thailand accounting for over 80 percent of cases reported through 1998 (Ministry of Public Health web site 1999). Much of the epidemic has been driven by commercial sex patronage although infected men are increasingly spreading the virus to their wives and non-commercial partners (Brown and Sittitrai 1995; Brown and Xenos 1994; Ford and Koetsawang 1991).

Reported AIDS cases are heavily concentrated in the age range 20-39, accounting for almost four-fifths of all cases through 1998. Only 4 percent of officially reported cases are aged 50 or older. While there is little doubt that the bulk of infections and deaths occur among young adults primarily in their 20s or 30s, it is possible that the reported numbers among older Thais underestimate their share of total victims. For example, health officials may be less likely to consider older persons to be at risk and thus not diagnose AIDS as readily for an older person as for a younger adult. It is noteworthy that a study that directly administered HIV tests to the general population in 5 villages in Northern Thailand revealed a 4.3% positive rate for persons 50-59 and 3.8% rate for those 60 and over compared to only a modestly higher overall rate of 4.6% (Nelson et al., 1994).

Prior studies of sexual behavior and attitudes provide some relevant background information to assist in interpreting the results of the current analysis of older Thais. One important source of attitudinal data is the 1986 nationally representative Social and Economic Consequences of an Aging Population in Thailand (SECAPT) survey of persons aged 60 and over. It included several attitudinal questions regarding sexual activity related to older persons.² Respondents were asked at what age men and women should stop

having sex. Generally respondents thought women should stop at earlier ages than men. For example, 16, 57 and 71 percent respectively said men should stop by ages 50, 60 and 70. In comparison, 34, 72 and 80 percent respectively indicated women should stop by these ages. In response to a direct question about whether the respondent agreed it was appropriate for couples aged 60 and above to have sexual relations, exactly two thirds of respondents indicated that they disagreed. On average, women in the sample stated earlier ages as being appropriate for the cessation of sexual relations for both sexes and were more likely to disagree that it was appropriate for couples age 60 to have intercourse.

Systematic qualitative research in Thailand based on focus groups and open-ended interviews, provides additional relevant background information on views of sexuality for the present study.³ The topic of when couples should cease sexual relations was discussed in a series of focus groups held in 1982-83 in all major regions of Thailand with younger (mostly age 20-35) and older (age 50 or more) generation married adults (Knodel, Chamrathirong and Debavalya 1987). The results are only partially consistent with the attitudinal data cited above from SECAPT. Many participants acknowledged that the frequency of intercourse drops off with age and some older couples stop completely. This was explained in terms of loss of interest, however, rather than normative proscriptions. A common view was that the continuation of at least occasional sex relations was largely due to continued interest on the part of husbands. There were no general feeling expressed that sex relations are inappropriate for older persons or that the cessation of intercourse should be linked to reaching any particular stage in the life course. These focus group results are consistent with the notable lack of references to the practice of terminal abstinence associated with becoming a grandmother or mother-in-law as is the case in some cultures (Knodel et al. 1982; Nag 1983).

Other qualitative research documents that male and female sexuality are viewed as fundamentally different by both Thai men and women (Knodel et al. 1996). Thai conceptions of male sexuality include a recognition of a strong innate male drive with a need for frequent outlet, and a preference for sexual variety. Women are seen as being far more subdued in their sexual needs and as exercising considerable self control in its expression. Views of female sexuality reflect an acceptance of the subordinate nature of a woman's sexual desires to those of a male partner. These vastly different conceptions of male and female sexuality are apparently reconciled when choosing a spouse and maintaining a satisfactory marriage by de-emphasizing the role of marital sex. Thus in focus group discussions of what constitutes a good spouse, satisfactory sex was generally seen by both men and women as secondary in importance to more general personal compatibility, mutual understanding, and fulfillment of complementary responsibilities as defined by the culturally embedded gender system (Knodel et al. 1999).

III. Data and Methods

The data for this study come from the Survey of the Welfare of Elderly in Thailand (SWET) conducted in 1995.⁴ The survey is based on a national probability sample of approximately 7,700 persons age 50 years old and over in private households who were usual residents of the household.⁵ It was a general survey of social, economic and health issues related to persons of which questions on sexual matters constituted a very small part. Interviews were conducted face to face. For the present study, we exclude unmarried women and respondents for whom a proxy provided an answer since, in these cases, questions on sexual activity were not asked. This reduces the sample

to approximately 5100 cases. Unless otherwise stated, the results presented in the present study are weighted to ensure the sample is nationally representative of persons aged 50 and over.

One common concern about surveys dealing with sexual matters is that respondents may find the questions too sensitive to answer or to answer truthfully (Cleland and Way 1994; Levy 1994; Levy and Albrecht 1989a). For example, the substantial levels of non-response for questions on sexual activity included in a 1988 national survey in the US have major implications for estimates of sexual activity, especially for older respondents (Call, Sprecher and Schwartz 1995). A previous large scale survey of reproductive-aged married women obtained very high response rates to questions on sexual activity (Knodel and Chayovan 1991). Results from SWET, as described below, reveal similar high response rates for such questions among the older population. This contrasts sharply with the U.S. national survey referred to above and eliminates the need to make special adjustments for non-response in our analysis.

Eligible respondents were asked the if they had sexual intercourse during the prior month. If they responded affirmatively, they were to say how often; if they responded negatively, they were asked when last intercourse occurred. In addition, respondents were asked how often they felt sexual desire. In SWET, only 1.0 percent of the sample did not provide any information on their sexual activity and 1.3 percent did not answer the question regarding sexual desire (thus reducing the sample suitable for analysis to approximately 5040-5050 cases). Among respondents who said they had intercourse during the prior month, only 0.4 percent did not tell the frequency of intercourse. Among those inactive in the prior month, only 0.8 percent did not answer when they last had intercourse; however, 11.2 percent said they could not recall when they last had intercourse. It seems reasonable to assume that most who could not recall had been abstinent for quite a while. Such an assumption is consistent with the sharp rise with age in the percent who could not recall when last intercourse occurred, which increases from 7.2 percent for respondents aged 50-59 to 18.1 percent for respondents aged 70 and over. More detailed information about various types of non-response by age group, sex and marital status is provided in an appendix table.

Respondents were not asked with whom they had intercourse. Presumably, among sexually active currently married respondents, the vast majority would have had intercourse with their spouse, or at least only report such intercourse in a general survey, although this can not be directly determined from the data. In the case of sexually active unmarried men, however, recent intercourse would necessarily be with a non-marital partner unless they became widowed, divorced or separated very recently. Given that non-marital sexual contacts, especially with commercial sex workers, have been the main phenomenon driving the AIDS epidemic in Thailand, the information on sexual activity of unmarried older males is of particular interest in this context. Marital sex, however, is also of interest in connection with the epidemic since coitus with a husband who had been infected through prior commercial sex patronage is the main transmission route for married women (Brown et al. 1994).

Based on the information available in SWET, it is possible to construct various measures of sexual activity. In the present study we focus on three: the proportions sexually active in the last month and the last year and coital frequency during the past month among those who were sexually active.⁶ Respondents who said they could not remember when they last had intercourse,

are considered not to have had intercourse for at least a year. Based on information in the survey on how long ago the spouse of a widowed person died, unmarried men whose wives died within the year prior to the survey are excluded from measures of sexual activity during the prior year (but not during the prior month). This facilitates interpretation of results by ensuring that almost all unmarried men who were sexually active according to these measures had intercourse with a non-marital partner.⁷ As a measure of sexual desire, we use whether or not the respondent indicated they felt desire at least occasionally.

IV. Results

A. Declining Sexual Activity and Desire with Age

A virtually universal finding from survey research dealing with marital sex is that sexual activity among cohabiting couples declines with age at least from the mid or late twenties (Call, Sprecher and Schwartz 1995; Cleland and Ferry 1995). Since most previous studies of the association of age and sexual activity are typically restricted to reproductive aged populations, the extension of the decline of sexual activity into older years of life is rarely documented. Figure 1 compares results for married Thai women based on the nationally representative 1987 Thai Health and Demographic Survey (TDHS) and the 1995 SWET, thus providing a full picture of the decline in sexual activity with age up to the oldest ages (since the TDHS sampled only married women, a similar comparison is not possible for men). The decline in the percentage of married women reporting intercourse during the prior month is almost linear from the mid-30s until the late 60s at which point only about 10 percent are sexually active according to this measure. While it is possible that similar biases characterize both surveys, the fact that the trend in the decline of activity with age within the two different age spans represented by TDHS and SWET fit together well is an encouraging sign suggesting consistency in reporting of sexual activity among Thai respondents.

Figure 2 shows the decline in sexual activity from age 50 onwards by single years of age during the prior month and year for both married men and women based on SWET. The results have been smoothed to eliminate irregular variation associated with the small numbers of cases for any particular single year of age.⁸ The general picture based on both measures, is a steady and relatively linear decline in the percent sexually active with age for both men and women. Also apparent is a consistent gender difference with lower percentages of women than men at each age reporting sexual intercourse during either the prior month or year.

Table 1 summarizes the measures of sexual activity by age and gender for married respondents of each gender and unmarried men aged 50 or above based on SWET. Also shown are the percent who felt sexual desire at least occasionally and a measure of concordance between desire and activity. For both married men and women, there is a clear negative association between age and either sexual activity or sexual desire. While the majority of married men and married women in their early 50s were sexually active during the prior month, only a minority of either in their 70s were sexually active during the prior year. Mean coital frequency among those sexually active in the prior month also declines with age for both married men and married women but the decline is far less pronounced than for the percentages sexually active. For each age group, married men consistently report higher levels of sexual activity and coital frequency than married women.

An even more pronounced gender difference is evident with respect to sexual desire, with substantially higher proportions of men than women in each age group saying they felt desire at least occasionally. In general, the percentage of married men in an age group who expressed at least occasional sexual desire is rather similar to the percentages who indicated at least some activity during the prior year. For married women, however, the percentages expressing sexual desire is noticeably lower than the percentages who were sexually active for each age group. This suggests that among older Thais, the sexual desire of husbands is a more important determinant of sexual activity within marriage than that of wives. Direct cross-tabulations between sexual activity status and sexual desire confirm this. For example, among those sexually active during the prior year, 90 percent of married men compared to only 57 percent of married women admitted to feeling sexual desire at least occasionally (results not shown).⁹

The percentage of non-married men who were sexually active during the prior month and year also tends to decline with age although the pattern is rather erratic, presumably reflecting the much smaller sample sizes on which this information is based. (Mean coital frequency among the sexually active is omitted for non-married men since the number of cases for this measure is insufficient.) The percentages reporting intercourse in either time frame are well below those for married men of equivalent age. Nevertheless, close to half of non-married men in their early 50s indicated at least some sexual activity in the prior year. In contrast to their married counterparts, the percentage of non-married men expressing sexual desire is substantially higher at all age groups than their levels of sexual activity during the prior year. At the same time, for each age group, a lower percentage of unmarried than married men expressed sexual desire. The expression of sexual desire among men thus appears to be in part a function of opportunity for fulfilling the desire (i.e. accessibility to a sexual partner). Moreover, a self-selection process may influence these differences if, among men who lose a spouse, those with stronger sexual desires are more likely to remarry than others. Nevertheless, a strong and consistent gender difference remains evident in that even unmarried men are much more likely than married women in each age group to say they felt occasional desire.

Table 1 also shows the percentage of respondents for whom reported sexual desire and activity are concordant. For this purpose, we define concordance as comprising situations in which either a respondent expressed at least occasional desire and was active in the prior year or expressed a lack of desire and was inactive in the prior year. Based on this definition, expressed desire for sex and stated activity are more or less concordant for a substantial majority of older Thais. This is particularly true for married men, for whom concordance is 87 percent overall. For married women and unmarried men overall concordance is fairly similar (approximately three-fourths of both groups indicated their desires and behavior accord with each other). For married men, the percentages experiencing concordance between desire and activity declines somewhat with age while for married women, and even more so for unmarried men, being in a concordant situation increases with age.

As Figure 3 shows, the components of concordance between desire and activity shift sharply with age and, in some respects, with gender. For all three groups, the combination of feeling desire and being sexually active decreases with age while the combination of no desire and inactivity increases in

importance. At all ages, however, the combination of feeling desire and being active is a more important contributor to concordance between desire and activity for married men than for either married women or unmarried men. The reverse is true with respect to the contribution of the combination of lacking desire and inactivity, which at all ages contributes more to concordance for married women and unmarried men than for married men. For all but the oldest age group, the combination of lacking desire but being active is noticeably higher for married women than for either group of men. Among women in their 50s, almost 30 percent had intercourse in the prior year despite a reported lack of sexual desire. As sexual activity decreases with age, however, so does the percentage of women who feel no desire but remain sexually active, falling below 10 percent for those ages 75 and above. In contrast, unmarried men stand out with respect to their high percentages (relative to the married men and women) who feel desire but are inactive.

B. The Gender Gap in Marital Sexual Activity and Desire

The results presented so far consistently indicate that married women over age 50 report less sexual activity and less sexual desire than married men of the same ages. When interpreting the difference in activity, it is important to take into account that wives are typically younger than their husbands. In the SWET sample of persons aged 50 and over, currently married women were almost 3 years younger on average than their husbands while married men were 5 years older on average than their wives. Given that marital coitus necessarily involves both husband and wife, the ages of both spouses are likely to jointly influence its probability. Since for both men and women, sexual activity and desire declines with age, having an older spouse likely decreases sexual activity and while having a younger spouse increases activity. This in turn would result in higher sexual activity among married men than women within the same age group and potentially could account for the observed pattern (Marsiglio and Donnelly 1991). In contrast, while feeling sexual desire may be influenced by perceptions of spousal interest in sexual relations, it is not a joint matter in the same sense as is intercourse. Thus it is less likely to be a function of age of one's spouse.

By statistically adjusting age differences between spouses, we can determine the extent to which the gender gap in reported marital sexual activity and desire is attributable to this influence. Logistic regression is used to adjust reported sexual activity status during the prior month and prior year as well as expression of sexual desire for ages of both respondent and spouse.¹⁰ Multiple classification analysis is used to adjust mean coital frequency during the prior month among those sexually active during the month. Results are shown in Table 2.

Since the married women in the sample tend to be somewhat younger on average than the married men (60.3 versus 61.7), adjusting only for the respondent's age increases the gender differences in all four measures. Once age differences between spouses are also taken into account, however, the gender gap in sexual activity is considerably reduced although not eliminated. In the case of the percent sexually active during the prior month, most of the observed (unadjusted) difference between married men and women is eliminated after adjustment for respondent's age and the age difference between the respondent and spouse. However, the gender differences in reported sexual activity during the prior year and mean coital frequency of those sexually active during the prior month are only reduced by less than half. Moreover, the difference in reported feelings of sexual desire are only modestly reduced by controlling for age differences between spouses.

The fact that differences in sexual activity as reported by married men and women persist in the presence of statistical controls for age differences between spouses suggests that there is some systematic reporting bias associated with gender with respect to sexual activity. Given that the sample design for SWET allowed only one respondent to be interviewed per household, it is not possible to directly compare reported sexual activity between husbands and wives who are married to each other (Chayovan and Knodel, 1997). Nevertheless, aggregate differences in how husbands and wives would report can be approximated by cross-tabulating measures of sexual activity (as reported by the respondent) by the age of the respondent's spouse and comparing the results with the extent of sexual activity reported by respondents of the same age and gender as the spouse. In the absence of reporting biases associated with gender and provided extra-marital sexual activity is either minimal or not reported by married respondents, we would expect the sexual activity of married men of a particular age group as reported by wives to closely resemble the levels reported by similar aged married men themselves. Likewise, the sexual activity of married women in a given age group as reported by their married men should be essentially the same as that reported by married women in the same age group. Table 3 compares married male and female sexual activity by age as actually reported for self and as implied by reports for spouses.

The results show that, in a particular age group, the percentage sexually active in the prior month as reported by married men themselves is consistently higher than the percentage active among similar aged husbands as implied by reports of married women. Likewise, the mean coital frequency among those sexually active in an age group as reported by married men themselves is consistently higher than that for husbands in the age group as implied by reports of married women. Exactly the reverse is true when self reports by married women in an age group are compared with percentages sexually active or the mean coital frequency implied for wives of the same age from reports by married men. These results confirm that married Thai men tend to systematically report higher levels of sexual activity than do married women. It is not possible from the data available to determine whether men or women report more accurately but it is reasonably clear that some bias in reporting is associated with gender.

C. Health Status

Besides age and gender, the potential influence of physical health on sexual behavior and desire is of particular pertinence for older persons, given the tendency for chronic health problems to increase with age. In SWET there is clear evidence of declines in health with age. For example, the percentage of respondents reporting their health as poor or very poor increases steadily with age from 21 percent of those 50-54 to 48 percent of those 75 and older. Several studies from the West have indicated positive associations between self-assessed health and sexual activity (e.g. Braehler et al.; Marsiglio and Donnelly 1991; Roa and Demaris 1995). Some have even claimed that declines in sexual interest and activity with advancing years is largely a result of the decline in physical health of one or both partners (Kaye 1993).

In SWET respondents were asked to assess not only of their own health but also that of their spouse. Responses were pre-coded into five categories ranging from very good to very poor. Thus the influence of health of each spouse on a couple's activity can be compared provided we treat self-assessed and spouse-assessed reports of health equivalently and assume that the

reported activity of each respondent represents that of their spouse as well. Table 4 presents results of multivariate analyses that include measures of the self/spouse assessed health of the husband and wife in addition to age and gender of the respondent and the age difference between spouses. Since the measures of health presumably refers to the time of interview and do not necessarily characterize the situation for the prior year, the percent sexually active during the prior year are omitted. Logistic regressions results are shown as estimated odds ratios while multiple classification analysis results of mean coital frequency are presented as adjusted means.

The age of respondent and the age difference between respondent and spouse both remain highly statistically significant in all three analyses shown. Moreover, consistent and pronounced declines in the estimated odds ratios and adjusted means are evident with each successive age group of respondent. Clearly declining sexual activity and desire with age is not merely a matter of declining health. Gender is only weakly related to the measures shown and is statistically significant at better than the .05 level only in relation to mean coital frequency. Husband's and wife's health are both related in statistically significant manners to being sexually active and feeling sexual desire but only the husband's health status is significantly related to mean coital frequency among those active in the prior month.

Despite the statistical significance of the associations, none of the measures of sexual behavior or desire show consistent declines with successively lower health ratings for either husband or wife. In the case of the percentage active during the prior month and the percentage feeling at least occasional desire, substantial reductions only occur when health of either spouse is assessed as poor or bad. At the same time, the odds ratio are distinctly lowest when the husband is in bad health but not when the wife is in bad health. In the case of coital frequency, wife's health appears to have little effect while the husband's health appears to substantially increase frequency when health is very good and decrease frequency when health is very bad. Thus there is some suggestion in the overall pattern of the results that poor health for the husband has a more depressing effect on sexual relations than for the wife.

Since the health of both spouses are likely to jointly influence coital activity (and perhaps sexual desire), examining the impact of husband's and wife's health separately may not make obvious the full extent to which health acts as an important influence (Call, Sprecher and Schwartz 1995). Thus we conducted analyses parallel to those shown in Table 4 but that incorporated a joint measure of both spouses health rather than separate measures. The joint measure is the simply the sum of the scores of the respondent and spouse regrouped into five categories.¹¹ Since using a joint health measure rather than separate measures for each spouse has almost no effect on the coefficients relating to age, gender and age difference between spouses, we only present the results for the health variable in Figure 4. The percentage having intercourse in the prior month and the percentage feeling sexual desire are shown as mean predicted probabilities based on logistic regression while adjusted means based on multiple classification analysis are shown for coital frequency of those active during the prior month.

When the joint effect of both spouses health is considered, consistent positive associations between health and the measures of sexual behavior and desire emerge. All three measures decline with each successively lower joint health rating. This suggests that deteriorating health is likely to contribute to reduced sexual activity independent of age effects. It is

interesting that, once a joint health measure is used, a consistent relationship with health emerges not only with the behavioral measures but also with the percentage expressing sexual desire. Thus desire is likely reflecting in part the situation not just of the respondent but also of the spouse. This is consistent with the suggestion that accessibility to opportunities for sexual relations may influence desire.

V. Discussion and Conclusions

The present study, based on the 1995 Survey of Welfare of Elderly in Thailand (SWET), provides the first nationally representative analysis of sexual activity and desire among older persons in Thailand and, to our knowledge, for any non-Western or developing country. The results indicate that sexual activity and desire decline steadily with age and that both are also related to gender and health thus confirming basic associations found in most studies from Western populations. Despite the limited scope of the questions included on the topic in SWET, a number of issues of general interest emerge from our analysis. These include their relevance for AIDS, the predominant influence of age, the relatively low sexual activity levels compared to the West, intersections with gender, the reconciliation of activity and desire, and methodological implications.

Implications for the AIDS epidemic. The results make clear that substantial proportions of older Thais remain sexually active within marriage with more than half of married men in the later sixties and more than half of married women in their earlier sixties reporting coitus within the last year. Moreover, more than half of married men in their later fifties and married women in their earlier fifties reported being sexually active in the prior month. Substantial proportions continuing marital sexual activity well past reproductive ages has been reported from representative surveys for numerous Western countries and there is little reason to doubt a similar situation prevails in many other settings. Thus stereotypes of older persons being asexual appear to be misleading oversimplifications (Hodson and Skeen 1994). In addition, a sizeable minority of unmarried males in their 50s engage in at least occasional non-marital intercourse. From the perspective of the AIDS epidemic, these levels of sexual activity are not trivial. Thus ignoring older persons in messages aimed at informing the public about the epidemic and encouraging sexual practices that reduce or eliminate risk of infection through heterosexual contact, as has generally been the case in Thailand as well as elsewhere, is ill-advised (Evans 1996; Feldman 1994).

At the same time, the risk of AIDS among older Thais should not be exaggerated. Given the substantial prevalence of commercial sex in Thailand, it is plausible that many of the partners of unmarried older men are commercial sex workers, a group repeatedly found to have high HIV infection levels (Brown et al. 1994; UNAIDS 1998a and b). Thus older non-married men, especially those in their fifties and sixties, appear to be a group particularly worthy of attention in the AIDS campaign. However, the more general older Thai population is quite likely at substantially lower risks than younger adults. A major barrier to making informed assessments of the absolute or relative HIV risk levels of the older population is that so little research has focused on their risk behaviors. Far more information than that provided in SWET would be required. Given the long latency period of AIDS, not just current contacts but earlier encounters over the prior decade or so could result in HIV infection and, with continuing marital sexual activity, expose their spouses to risk. Thus it would be useful for future research on the older population in Thailand to obtain information on

the sexual histories of both married and unmarried persons over the last 10 or so years, including the frequency and nature of non-marital partners, as well as current and past condom use.

The predominant influence of age. As in numerous studies in the West, age stands out as having a predominant influence on sexual activity among older Thai. The reasons underlying the strong negative correlation between age and sexual activity are likely similar to those cited to explain comparable associations with age elsewhere. These include biological aging (including male physical ability to engage in coitus and hormonal changes in both men and women), diminished health, and habituation to sex with a particular partner over time (Call, Sprecher and Schwartz 1995). The SWET data also reveal a pronounced decline in the percent feeling sexual desire with age for both men and women. This undoubtedly is a key factor in the decline in sexual activity that likely has both biological and social roots.

It is not possible in our data to separate out biological from social influences on the age-related decline in percentages sexually active and feeling desire. However, while poor health is associated with reductions in both, it accounts for only a small part of the decline in activity and desire with age. This finding is consistent with similar analyses for the US (Call, Sprecher and Schwartz 1995; Marsiglio and Donnelly 1991) and contradicts claims by some commentators that declines in physical health are the main force underlying the reduction in sexual relations associated with aging in later life (Kaye 1993).

A considerable literature exists on the impact of menopause on sexual desire and behavior among women. Most research is based largely on small and non-representative samples in Western countries and typically indicates a decline in sexual interest, frequency of sexual intercourse, and vaginal lubrication in association with menopause (Dennerstein et al. 1994; McCoy 1997 and 1998). It is not possible to examine this issue directly with the data at hand. However the linear nature of the decline with age in percentages of married women sexually active between reproductive and later ages (as evident from the comparison of the SWET and TDHS results in Figure 1) suggests that menopause does not prompt any very observable acceleration in the cessation of sexual activity. If such were the case, a more rapid drop off in the percentage sexually active would be apparent between the mid-forties and mid-fifties, the age span where menopause is concentrated (Gray 1976; Knodel et al. 1982). No such pattern is evident.¹² Several reasons could underlie the lack of a more precipitous drop in activity in the menopausal age range. The effect of menopause may simply be too modest to be revealed in a cross-sectional analysis by the relatively crude measures available in the TDHS and SWET data sets. Alternatively, while menopause may be associated with a decline in sexual desire among Thai women, marital sexual activity may be driven mainly by male interest, as suggested below, and thus not be particularly sensitive to the situation of wives.

That social influences may also be contributing to the reduction of activity with age is suggested by the general agreement between the attitudinal data from the 1986 SECAPT survey of persons 60 and over and the behavioral data from SWET. As noted above, substantial portions of older persons said they disagreed that couples aged 60 and over should have sexual relations. Moreover, the views about when men and women should cease having sexual relations more or less correspond to when older Thais actually appear to cease having intercourse. For example, among the SECAPT sample, 57 percent thought men should stop having sexual relations by age 60 and 71 percent

thought women should stop by that age. These are very close to the 54 percent of men and 70 percent of women aged 60 who, as indicated by the smoothed averages presented in Figure 2, reported that they did not engage in intercourse during the prior month according to SWET. If we define activity to encompass the entire prior year, however, then the attitudes are more conservative than what the behavioral data implies occurs in practice.

The cross-sectional nature of the data on which our analyses are based means that the association with sexual activity and desires with age could be influenced by cohort effects as well as life course and biological aging effects. Several studies in the West have speculated that cohort effects may be present among older persons, especially since Western attitudes towards sexual matters generally are thought to have changed substantially during the last half century (e.g. Delbes and Gaymu 1997; Marsiglio and Donnelly 1991). In the case of Thailand, however, there is little basis for speculation about significant changes in sexual behavior over the period when the current cohorts of older persons were growing up given the lack of systematic research into these topics at that time. However, we note that the attitudinal data regarding when men and women should cease sexual activity and whether couples over age 60 should have sexual relations from the 1986 SECPAT survey of persons aged 60 and over are quite similar among different age groups of respondents (e.g. 68 percent of those 60-64 compared to 69 percent of those 75 and above disagree that couples over 60 should have sexual relations). Thus we see no reason to assume substantial cohort effects for our sample although the possibility needs at least to be acknowledged.

Lower activity than in the West. Overall, lower levels of sexual activity are reported by older age Thais than by persons of the same age in Western populations as suggested by comparisons with results from surveys in the US, France and Germany. Although such comparisons are complicated by differences in measures, reference populations, and non-response rates, they clearly point to relatively lower levels of sexual activity among older Thais. Analysis of the 1988 NSFH for the US indicates that non-response is associated with low activity (Call, Sprecher and Schwartz 1995). However, even under the extreme assumption that all non-response represents cases of sexual inactivity, the percentage active in the last month would still be substantially above those indicated by SWET for older Thais.¹³ Likewise, the mean levels of coital frequencies among those who are active are more than twice as high for most age groups of older married Americans as indicated by the NSFH data than are found for older Thais based on SWET. A later US survey focusing specifically on sexual issues and but that excluded adults aged 60 and older, indicates coital activity for both men and women in their fifties that are also at least twice as high as those reported by their Thai counterparts (Laumann et al. 1994).¹⁴

Elsewhere, sexual activity also appears to be higher in the West than in Thailand. As indicated by a 1992 survey, both French men and women aged 50-69 are far more active than their Thai counterparts (Delbes and Gaymu 1997). This is apparent with respect to the percentages active in the prior month and the prior year as well as mean coital frequency among those who are active.¹⁵ Finally, results from SWET also indicate lower percentages reporting sexual activity in the prior year than among a representative sample of married German men and women for the 61-70 age group (Braehler and Unger 1994). The differences, however, are less pronounced than in the comparison with the US and French surveys and the percentages active for the age group 70 and over are similar for Thais and Germans.

It is of course possible that the observed differences in sexual behavior derived from these studies are largely artifacts of differences in reporting accuracy. No assessments of the validity of the data for any of the surveys cited or for SWET are available. However, without contrary evidence, there is little basis to doubt that the differences are real. Moreover, although many older Thais denied having intercourse in the prior month, most reported when their last coitus occurred with quite a few indicating that it was within the prior year. Thus many older Thais do not necessarily deny having recent sex even if their reported frequency is low.

Variation in the overall health levels of the populations could be involved since in general we would expect the older populations in economically more advanced countries to be characterized by better health on average than in Thailand. It is noteworthy, however, that the levels of coital frequency indicated by married Thai women in reproductive ages in the 1987 TDHS (Knodel and Chayovan 1991) are also considerably lower by more or less by an equivalent factor than the levels indicated by Americans in the equivalent ages in the 1988 NSFH (Call, Sprecher and Schwartz 1995).¹⁶ Moreover, sexual activity even among the couples reporting good health in SWET is lower than indicated by US and French surveys for all couples (results not shown).

Levy (1994) points out the importance of access to a conducive environment (or private space) for sex and suggests that coresiding with adult children may depress the sexual activity of older age parents, especially if the adult children do not wish to acknowledge the sexuality of their parents as some research has suggested. Thus the fact that the majority of older Thais, in sharp contrast to older persons in most Western countries, coreside in the same household with at least one adult child might help account for their relatively lower levels of sexual activity. For example, according to SWET, only 15 percent of married persons aged 50 or older lived together as a couple with no others in the household while almost 70 lived with an adult child. However, regression analysis (controlling for age, gender and age differences between spouses) indicates neither coresidence with adult children nor living in a household with only one's spouse shows any statistically significant relation in the SWET sample to either being sexually active in the prior month or to coital frequency among those who are sexually active (results not shown).

Another potential influence could be the relatively high prevalence of commercial sex availability and patronage in Thailand. Existing data however suggest it is unlikely many married men seek commercial sex or even extramarital sex for routine fulfillment of their sexual desires and thus it seems unlikely this can serve as important alternative to marital sex on a widespread scale. For example, according to the 1990 urban survey by Deemar (1990), 9 percent of married men reported sex with a prostitute in the prior 12 months. Somewhat higher levels were found in the 1990 Partner Relations Survey which indicated nationally 13 percent of married men under age 50 had paid for sex during the past year and 17 percent had extramarital sex of any kind (including non-commercial sex) in the prior year (Sittitrai et al. 1992). According to the 1993 Survey of Women's Status and Fertility in Thailand (SWAFT), indicated that about three-fourths of husbands of reproductive aged women said they had never been to a prostitute since they married and about four fifths said they never had an extramarital affair (original tabulations). Levels for older men would undoubtedly be lower than these surveys indicate. Moreover, there is clear evidence that by 1995, the year of SWET, commercial sex patronage declined, presumably in response to the HIV/AIDS epidemic (UNAIDS 1998b).

Assuming the validity of all these comparisons, social influences are likely to play an important part in accounting for them. As noted earlier, previous qualitative research suggests that marital sex does not appear to be emphasized in discussions about the important qualities of a spouse among Thais. Thus sexual relations in marriage may be of lesser importance among older Thais, and perhaps Thais in general, than among older persons in the West, at least at this point of time. That substantial change can and does occur in levels of older age sexual activity over time is indicated by the comparisons between results of the 1992 French Survey and a 1970 survey (Delbes and Gaymu 1997). These likely reflect changing views of sexuality and appropriate sexual behavior both inside and outside of marriage in association with a host of other societal changes. Evidence is accumulating that the sexual behavior of Thai men, at least with respect to commercial sex patronage, has been changing significantly under the influence of the AIDS epidemic (Hananberg and Rojanapithayakorn 1998; Mason et al 1995; Mills et al. 1997 and 1998; UNAIDS 1998b). With such changes could come a greater emphasis on sexual fulfillment within marriage.

More generally, although substantial proportions of older populations are likely to be sexually active in numerous diverse settings, the contrast between the Thai and Western patterns suggest that local circumstances and cultural norms are likely to operate in ways that will lead to substantial cross national variation in levels of activity. Documenting and explaining such differences is a methodologically challenging and substantively very interesting area for future research.

Intersections with gender. Numerous dimensions of older age sexuality relate to gender in Thailand. Pronounced differences between men and women within the same age group are evident in both sexual activity and desire. Among married persons, women report lower activity at each age than do men. One important contributor to lower female activity at any given age is the tendency for wives to be younger than husbands. Since activity declines with age for both sexes, persons with younger spouses (mainly men) are more sexually active than persons with older spouses (mainly women). In addition, reporting biases associated with gender appear to also play a significant role as discussed below.

The very substantial differences in the percentages of men and women who indicate they felt sexual desire is largely unaccounted for by age differences between spouses and poses a particularly interesting finding to explain. Although we have no direct supporting evidence, gender specific differences in the normative acceptability of expressing sexual feeling in an interview may play some role. However, lower sexual interest among older women than men is clearly not a situation unique to Thais and appears to be a common finding elsewhere as well (Levy and Albrecht 1989b). For example, recent surveys in the US and Australia have documented differences of comparable magnitude (Minichiello, Plummer and Seal 1996; National Council on the Aging 1998). Despite the generality of gender difference in sexual interest, there is little consensus as to explanations (Levy and Albrecht 1989b). Men and women's sexual behaviour and psychology undoubtedly reflect genetic differences that have emerged over evolutionary time (Buss 1994; Low 2000). Nevertheless, this biological basis only provides the foundation upon which social, cultural and environmental forces mold male and female sexuality. Determining the extent of cross-national variation in gender differences in older age sexual behavior and attitudes should provide interesting additional material for consideration in this debate.

Although the percentages feeling sexual desire at any age are much higher for older Thai men than women at any age, steady declines in the percentage feeling desire with increasing age parallel declines with age in sexual activity for both. Nevertheless, it is the decline in the male sexual desire that appears to play the primary role in the decline in activity. In general, among older Thais, the percentages of married men at different ages who had sexual feelings corresponds closely to the percentages who remained active during the prior year while, for women, the percentage feeling sexual desire is well below the percentage who experience coitus. A review of US studies likewise finds considerable evidence that it is the male who tends to be the one responsible for discontinuing sexual activity among couples (Marsiglio and Donnelly 1991). Although this pattern may be very common across cultures, there still may be considerable variation in the extent to which male interest dominates older age sexual activity. Further research across a broad range of settings should help clarify this.

Reconciliation of desire and activity. Much of the literature on aging and sexuality, almost all of which concerns Western societies, portrays remaining sexually active into old age in a positive light, viewing it as an important contributor to the quality of life. Indeed, some of the writing is more in the vein of advocacy than attempts at objective assessment. The emphasis is often on the fact that some persons do remain sexual active until quite old ages despite popular images to the contrary while the decline in activity or interest is played down or attributed to attitudes related to ageism or external factors beyond the control of older persons themselves such as declining health (e.g. Hodson and Skeen 1994; Kaye 1993).

Our findings suggest this may be too narrow a perspective for approaching the topic, at least in the Thai context. The rapid decline in sexual desire evident from our survey means that large portions of older persons are probably satisfied to be sexually inactive. This may be particularly true for older Thai women, given that only slightly more than one third of those 50 and over and only slightly more than a fifth of those 60 and over indicated they felt sexual desire even just occasionally. Even among men, only modestly more than half (56 percent) of those 60 or over and less than half (44 percent) of those 65 or older said they felt any sexual desire. It seems presumptuous to assume that older persons who are sexually active necessarily are experiencing a better quality of life than those who are not, especially when the evidence from SWET suggests that there often is either discordance in the sexual desire between the husband and wife in a couple or both no longer feel sexual desire.

Methodological implications. The very high response rates to questions related to sexual matters in SWET challenge the commonly held view that non-response will necessarily be a serious problem for population based studies of the sexual behavior of older persons (e.g. Levy and Albrecht 1989a). It also contrasts with the experience encountered in the US 1988 National Survey of Families and Households (NSFH), a major source for estimates of sexual activity among older Americans (Call, Sprecher, and Schwartz 1995). High response of course does not guarantee validity but it at least means that in some settings questions about sexual behavior can be asked to older persons without high non-response bias.

The substantially higher response rates in SWET than in the NSFH may stem in part from the fact that interviews in SWET were carried out entirely face-to-face while in the NSFH the questions on sexual behavior were self administered. With face-to-face interviews, respondents may feel more

reluctant to refuse to answer a question (Levy and Albrecht 1989a). It is also possible that sexual matters are less sensitive to older Thais than older Americans. We note, however, that in general, response rates to surveys in Thailand are quite high compared to those in Western countries. Thus the low non-response to sexual questions in SWET likely reflects a generally more cooperative attitude among Thais than Americans (and probably other Westerners) towards survey takers that in turn is rooted differences in the cultural and social contexts. Thus Western experience with surveys on sexual matters among older persons may not be a reliable guide for numerous non-Western settings.

While the low non-response rate is encouraging, our analysis also points out that there is bias in responses associated with gender. Among older Thais, married women appear to provide more conservative estimates of sexual activity than do married men. Moreover the magnitude of the differences is substantial. Unfortunately, the data in SWET do not permit determination of the relative validity of men's and women's responses. It seems likely this difference between men and women in reporting of sexual activity is rooted in the very different socially constructed views of male and female sexuality that prevail in Thai society referred to above. It is noteworthy that this gender bias in reporting of sexual activity contrasts to the reasonably good agreement in couple responses found in the US NSFH survey (Call, Sprecher and Schwartz 1995). As already cited, the 1986 SECPAT survey makes clear that Thais believe women should cease sexual activity at earlier ages than men. It may be that while face-to-face interviewing elicits higher response rates to questions on sexual activity than a self administered questionnaire approach, it may also lead respondents to be more concerned about providing responses in accord with perceived social values and thus detract from their factual accuracy. Determining how prevalent gender biases in reporting are in other settings, understanding their sources, and learning how to minimize them where they exist poses an interesting challenge for research on older age sexual behavior.

Survey questions are necessarily brief and hence typically superficial. A fuller understanding of older age sexuality and sexual behavior will thus benefit from a broader range of approaches. Qualitative research should be able to probe more deeply into the meaning of the findings of declining desires and activity. In general, the shortage of representative surveys providing quantitative data is matched by a dearth of qualitative research into the topic of sexuality in later life (Minichiello et al. 1996). With older persons becoming an increasing share of populations worldwide, a fuller understanding of older age sexuality likewise increases in importance.

ENDNOTES

¹ There is some evidence that HIV infectivity is highest shortly after infection and before antibodies appear and then again much later during the course the infection when symptoms are present (Jacquez et al. 1994; Hudson 1993).

² The results of (SECAPT) that are presented in this section are based on original tabulations made by the present authors.

³ In discussing prior qualitative research we limit ourselves to the few studies that attempted a more systematic data collection approach with a wider coverage since they are more comparable to the type of survey research

on which the present study is based (Knodel 1997). There are also numerous ethnographic and anthropological studies that refer to sexual behavior and views of sexuality in Thailand but it is beyond the scope of the present study to review them. For a sampling of recent anthropological writings on the topic see Jackson and Cook 1999.

⁴ SWET was conducted jointly by the Ministry of Public Health, the Health System Research Institute, and the Institute of Population Studies of Chulalongkorn University.

⁵ For details of the survey methodology and sample see Chayovan and Knodel 1997.

⁶ We recognize that sexual experience can be defined much more broadly to encompass a whole range of behaviour other than coitus. Indeed for some, perhaps many, older persons forms of sexual expression other than coitus may well be of greater significance in contributing to their own sense of well being. However, our limitation to the consideration of coitus is dictated by the information available in the survey. In addition, in terms of the relevance of sexual activity for the AIDS epidemic, non-coital forms of sexual expression are unlikely to play a part.

⁷ Information on when divorce or separation took place is not available in SWET. Thus it is possible that a small number of divorced and widowed men who report sexual activity within the prior 6 months or year are referring to marital sex. Given that only 14 percent (weighted) of all unmarried men in the sample are divorced or separated and among them few are likely to have experienced the dissolution of their marriage within a year, the extent to which this invalidates interpretation of sexual activity among unmarried men as being non-marital is minimal.

⁸ A compound data smoothing procedure known T4253H and available in the SPSS statistical package was used to smooth out irregular variation in the original series.

⁹ Part of this difference could be a greater reluctance among older women compared to older men to state having sexual feelings in an interview. However, without evidence to support this possibility, the suggestion is merely speculative.

¹⁰ To derive adjusted percentages based on logistic regression, we first calculated a predicted probability for each individual included in the analysis based on regression coefficients and assuming that all individuals fall into the particular gender under consideration while retaining their actual values with respect to other control variables. Then we calculated the adjusted percentage as the mean of the predicted probabilities for that gender for all individuals included in the analysis.

¹¹ Since the assessed health score for both the respondent and the spouse ranged for 1 (very good) to 5 (very poor), there were 9 possible joint scores ranging from 2 to 10 after summing the two. To regroup the summed scores, each pair of adjacent scores were combined into a single category except the middle score of 6 which contained the largest number of cases and was left as separate category.

¹² The trend in sexual desire can not be examined for this age range since the TDHS did not include a question on this.

¹³ Precise comparisons with published results from NSFH are made difficult by the fact Call, Sprecher and Schwartz (1995) only show graphical results while Marsiglio and Donnelly (1991) make no adjustment for non-response and use different age groups. However a few examples can illustrate that the NSFH indicates substantially higher sexual activity for Americans than SWET does for Thais of equivalent ages. Unadjusted results provided by Marsiglio and Donnelly indicate the percent of Americans sexually active in the prior month among 60-65 year olds is about twice as high as for Thais of the same age group (65 versus 33 percent). Relative differences are even greater for older age groups. According to calculations made by Call, Sprecher and Schwartz, however, if all non-responses are treated as indicating no activity, the percentage active among Americans aged 60-64 is about 46 percent compared to 35 percent active among Thais of the same age. In fact, even under this extreme assumption about non-responses, the NSFH percentages active in the prior month are higher than for SWET for all age groups among the older population. The difference is minimal at ages 50-54 (62 compared to 61 percent) but in relative terms increases steadily with age to the point where the percent active is over three times as high for persons age 75 and over in NSFH than in SWET (about 16 versus 5 percent). Non-response may also influence comparisons between NSFH and SWET with respect to mean coital frequency but is unclear in what direction.

¹⁴ Exact comparisons are not possible since the frequency measure in the US study includes acts of oral sex and are not limited to heterosexual acts (Laumann et al. 1994, Table 3.6).

¹⁵ For example, 93 percent of French men and 78 percent of women age 50-69 with partners had intercourse in the previous month compared to only 50 and 36 percent respectively of married Thai men and women of the same age. Also, among those active, 55 and 39 percent of the French men and women reported 5 or more acts of coitus in the prior month compared to only 10 and 5 percent of their Thai counterparts. Since non-response in the French survey was modest, biases associated with non-response could have only minimal effect on these differences.

¹⁶ Again precise comparisons can not be made both because the published NSFH results used for this comparison are only presented in graphical form and for men and for married women combined (see figure 2 in Call, Sprecher and Schwartz). However few examples can illustrate the nature of the differences. A mean coital frequency of approximately 4 times during the prior month was reported by sexually active married women aged 30-34 in the TDHS compared to a mean of about 8.4 for sexually active married Americans of both sexes in that age group. The fact that the NSFH results refer to both married men and women inflates the coital frequency compared to the SWET results which are based only on women (given that the wives of the men are on average younger than their husbands). However this accounts for only a small part of the difference as indicated by the fact mean coital frequency in the NSFH for 35-39 years old is about 8 and thus still twice as high as for the Thai women 30-34. Likewise, mean coital frequency among sexually active married persons in their 60s (both sexes combined) is about two and a half times as high in SWET as in NSFH.

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Table 1. Indicators of sexual activity and desire by age and sex, among married persons aged 50 and above, Thailand 1995

Gender and age	Percent sexually active during prior		Coital frequency for those active in prior month	Percent feeling some sexual desire	Percent whose desire and activity are concordant(a)	Unweighted number of cases(b)
	month	year				
Married men						
50-54	68.7	93.7	2.6	93.1	92.5	720/498
55-59	55.1	83.3	2.7	81.6	88.6	672/377
60-64	40.2	73.4	2.1	73.3	83.4	541/213
65-69	29.2	60.4	2.0	58.7	84.3	384/110
70-74	15.0	35.3	2.0	32.6	83.4	224/39
75+	6.0	22.2	*	21.6	82.3	181/16
Total	43.2	70.6	2.4	70.0	86.6	2722/1253
Married women						
50-54	52.2	84.4	2.1	53.0	66.5	488/261
55-59	40.0	71.8	1.9	43.3	67.8	499/188
60-64	25.8	53.2	1.8	28.5	71.7	349/88
65-69	11.4	35.3	1.6	22.9	85.5	264/36
70-74	10.9	23.7	*	8.5	84.6	122/9
75+	1.8	12.4	*	1.8	89.5	68/1
Total	32.3	59.8	1.9	35.5	73.0	1790/583
Unmarried men						
50-54	14.9	45.9	--	86.5	51.4	40/44
55-59	5.9	21.4	--	71.1	47.6	58/66
60-64	2.7	9.6	--	36.3	71.2	82/90
65-69	2.4	19.7	--	45.7	71.3	79/86
70-74	0.0	9.5	--	24.1	82.9	72/76
75+	2.6	5.0	--	13.2	90.0	145/156
Total	3.5	13.6	--	36.3	74.8	476/518

Notes: Results for unmarried men exclude men widowed within last year for measures referring to sexual activity during last year and the measure of consistency between desire and activity.

* = result not shown as based less than 20 cases.

(a) Desire and activity are concordant if either the respondent expressed at least occasional desire and was active in prior year or the respondent expressed no desire and was not active in prior year.

(b) For married persons, the first number represents the lowest number of cases with non-missing values for each age group for the various measures excluding coital frequency; the second number represents the number of cases with non-missing values for coital frequency (conditioned on being sexually active in prior month). For unmarried men, mean coital frequency is not shown since the number of cases of sexually active in the prior month is very small. Thus for unmarried men, the two numbers represent the range in number of cases with non-missing values for each age group for the various measures shown excluding coital frequency.

Table 2. Unadjusted and adjusted measures of sexual activity for married men and women aged 50 and over, Thailand 1995

	Unadjusted	Adjusted for age group	Adjusted for age group and spousal age difference
Percent sexually active during prior month			
Married men	43.2	46.1	42.6
Married women	32.3	31.8	39.7
Difference	10.9	14.3	2.9
Significance level	P=.000	P=.000	P=.051
Percent sexually active during prior year			
Married men	70.6	73.4	70.8
Married women	59.8	59.0	64.9
Difference	10.8	14.4	5.9
Significance level	P=.000	P=.000	P=.000
Mean coital frequency among sexually active during prior month			
Married men	2.44	2.47	2.37
Married women	1.93	1.89	2.07
Difference	0.51	0.58	0.30
Significance level	P=.000	P=.000	P=.011
Percent feeling sexual desire (at least occasionally)			
Married men	70.0	72.6	70.0
Married women	35.5	35.0	41.2
Difference	34.5	37.6	28.8
Significance level	P=.000	P=.000	P=.000

Notes: Results are adjusted either by logistic regression (for percent sexually active during stated period of time and percent feeling sexual desire) or multiple classification analysis (for mean coital frequency). In the case of adjustment by logistic regression, the results shown represent the mean predicted probabilities based on taking into account the characteristics indicated, i.e. age of the respondents (as a categorical variable) and the age difference between the respondent and spouse (as a continuous variable). The P-values indicate statistical significance of the difference between married men and married women for each indicator of sexual activity. In the case of the unadjusted results, statistical significance is based on tests for differences between proportions and differences between means (t-test). In the case of results adjusted by logistic regression the P value is based on the Wald statistic. Significance for the MCA adjusted results is based on the F-test.

Table 3. Percent sexually active in prior month and mean reported coital frequency, by gender, as actually reported and as implied by reports of spouses

Age	Percent of married men sexually active in prior month		Percent of married women sexually active in prior month	
	As reported by male respondents	As implied by married women's reported activity	As reported by female respondents	As implied by married men's reported activity
under 50	n.a.	71.7	n.a.	60.8
50-54	68.7	52.7	52.2	55.8
55-59	55.1	46.0	40.0	47.9
60-64	40.2	22.3	25.8	34.1
65-69	29.2	19.3	11.4	21.7
70-74	15.0	14.2	10.9	8.5
75+	6.0	3.4	1.8	3.0
	Male coital frequency		Female coital frequency	
	As reported by male respondents	As implied by married women's reported activity	As reported by female respondents	As implied by married men's reported activity
under 50	n.a.	2.90	n.a.	2.68
50-54	2.64	1.94	2.13	2.87
55-59	2.71	1.82	1.87	2.04
60-64	2.07	2.00	1.82	1.83
65-69	1.97	1.73	1.58	1.99
70+	1.96	1.73	*	*

* = result not shown as based less than 20 cases.

Table 4. Estimated odds ratios of the probability of being sexually active during specified periods and adjusted coital frequency as a function of age, gender, age difference with spouse, place of residence, and joint index of the couple's health status, for married persons aged 50 and over, Thailand 1995

	Odds ratios (a) of probability of		Adjusted coital frequency for those active in prior month(b)
	being sexually active during prior month	feeling sexual desire (at least occasionally)	
Age of respondent	(P=.000)	(P=.000)	(P=.000)
50-54(c)	1.00	1.00	2.48
55-59	.56	.54	2.42
60-64	.30	.31	1.95
65-69	.15	.18	1.75
70-74	.08	.07	1.61
75+	.02	.03	1.22
Gender	(P=.147)	(P=.068)	(P=.015)
male(c)	1.00	1.00	2.36
female	.88	.22	2.08
Age difference with spouse	(P=.000)	(P=.000)	(P=.000)
	1.07	1.06	n.a.
Husband's health	(P=.000)	(P=.000)	(P=.000)
very good(c)	1.00	1.00	2.73
good	.97	.92	2.04
moderate	1.12	1.06	2.22
poor	.71	.52	2.12
very poor	.32	.34	1.78
Wife's health	(P=.000)	(P=.000)	(P=.081)
very good(c)	1.00	1.00	2.06
good	.84	1.33	2.43
moderate	.84	1.06	2.26
poor	.56	.83	2.11
very poor	.60	.64	2.23

Notes: In all analyses presented in this table, the age difference between the respondent and spouse was entered as a continuous variable; all other variables were entered as categorical variables.

(a) Odds ratios are based on logistic regressions. The P-values are the based on the Wald statistic and for categorical variables refer to the entire set of categories comprising the variable taken together.

(b) Adjusted by multiple classification analysis. The P-values are based on the F-test.

(c) Omitted category in the logistic regression.

n.a.=not applicable

Appendix. Number of respondents and response rates to questions on sexual activity.

	50-59	60-69	70+	Total
Unweighted cases by sex and marital status				
Proxy respondent (excluded)	46	33	99	178
Non-married women (excluded)	658	912	855	2425
Non-married men	111	177	232	520
Married women	1009	633	200	1842
Married men	1398	933	413	2743
Total	3222	2687	1799	7708
Percent distribution by sex and marital status				
Proxy respondent (excluded)	1.4	1.2	5.5	2.3
Non-married women (excluded)	20.4	33.9	47.5	31.5
Non-married men	3.4	6.6	12.9	6.7
Married women	31.3	23.6	11.1	23.9
Married men	43.4	34.7	23.0	35.6
Total	100	100	100	100
% not answering if had sex last month				
Non-married men	0.9	0.6	0.0	0.4
Married women	1.5	2.5	4.0	2.1
Married men	0.1	0.3	1.0	0.3
Total	0.7	1.1	1.4	1.0
Among sexually active, % not answering coital frequency				
Non-married men	0.0	0.0	0.0	0.0
Married women	0.2	0.0	0.0	0.2
Married men	0.6	0.3	0.0	0.5
Total	0.4	0.2	0.0	0.4
Among sexually inactive, % not answering time since last sex				
Non-married men	4.1	2.4	0.0	1.6
Married women	1.1	0.8	0.6	0.9
Married men	0.6	0.2	0.8	0.5
Total	0.6	0.7	0.5	0.8
Among sexually inactive, % not remembering time since last sex				
Non-married men	17.0	16.9	26.1	21.2
Married women	8.9	12.3	19.9	11.9
Married men	3.7	7.8	12.0	7.4
Total	7.2	10.7	18.1	11.2
% providing complete information on sexual activity (a)				
Non-married men	81.1	81.4	74.1	78.1
Married women	93.1	87.4	77.5	89.4
Married men	98.0	94.4	88.1	95.3
Total	95.3	90.5	81.8	91.4

Notes: Results are unweighted.

(a) Respondents are considered to have provided complete information if the reported if they were sexually active in last month and either reported coital frequency if active or a duration since last sex if inactive.

Figure 1. Percent of currently married women reporting intercourse during previous month - Comparison of 1987 TDHS and 1995 SWET

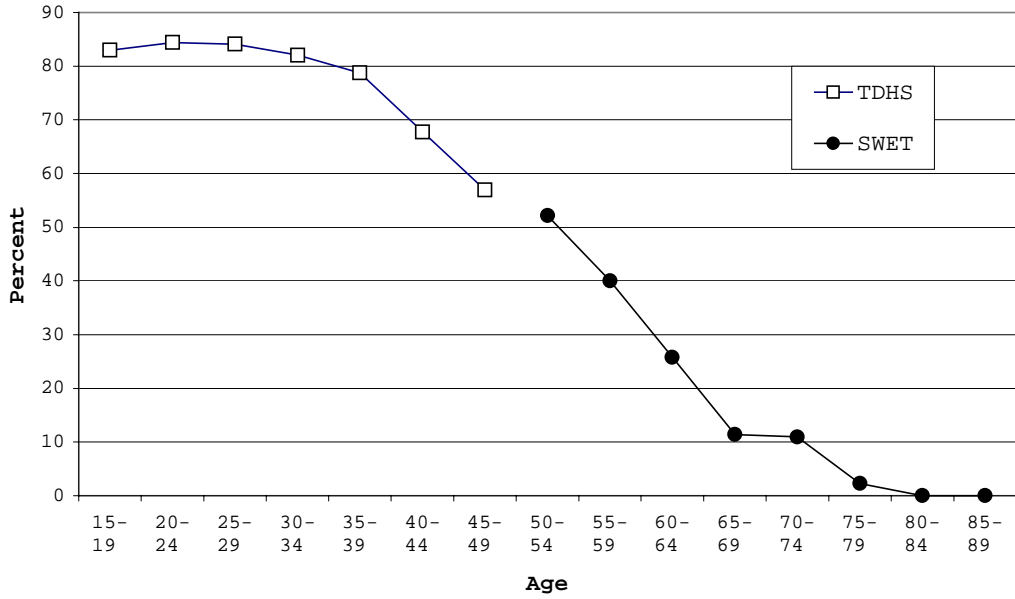


Figure 2. Percent of married persons sexually active within specific periods, by age and gender (smoothed averages)

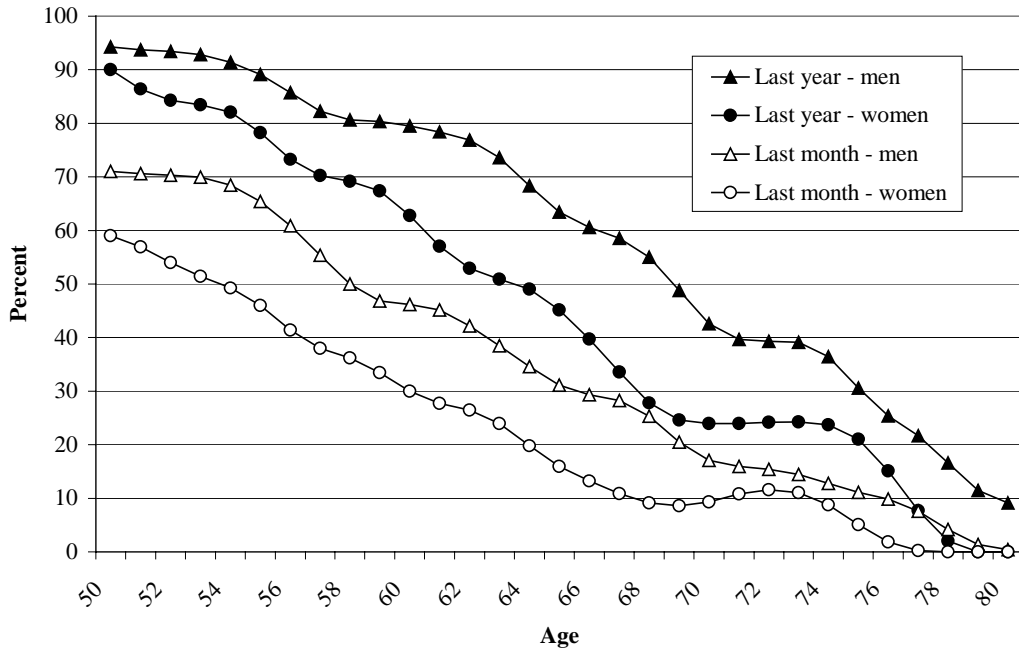
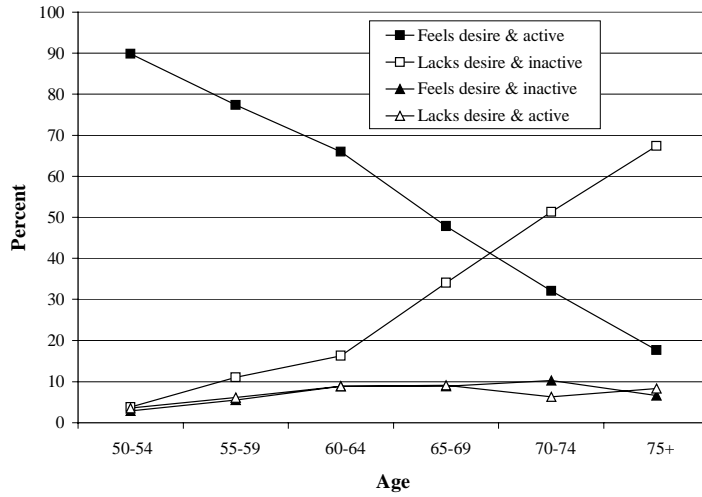
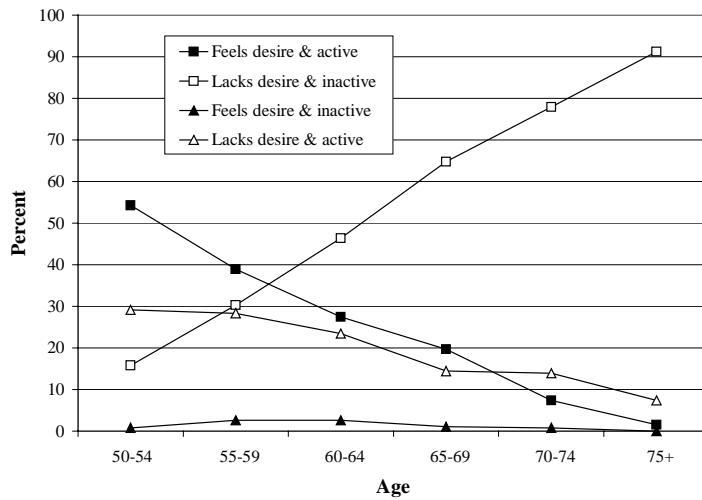


Figure 3. Comparisons of sexual activity (in prior year) and feelings of sexual desire (at least occasionally) by gender and marital status

A. Married men



B. Married women



C. Unmarried men

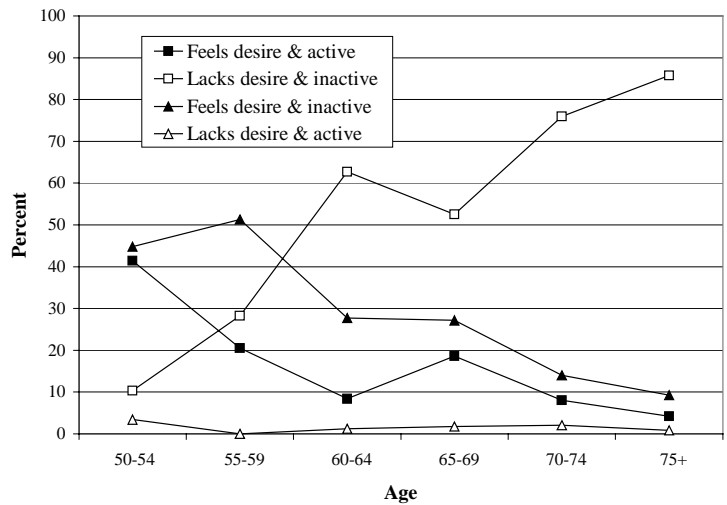
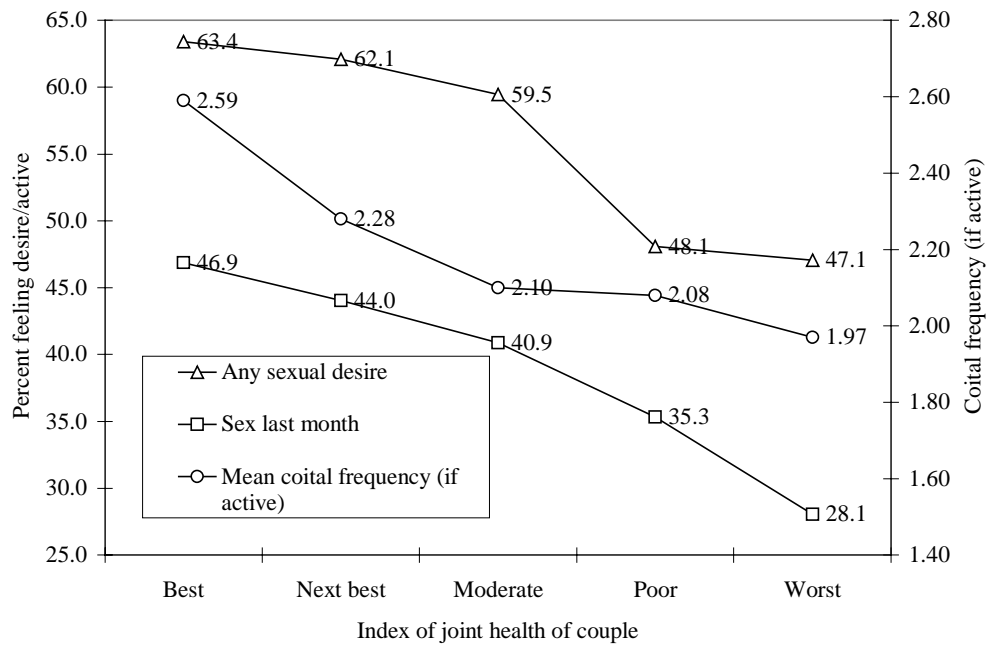


Figure 4. Measures of sexual activity and desire, by joint index of joint health of couple (adjusted for age, gender and spousal age difference)



Notes: Results are statistically adjusted either by logistic regression (percent feeling sexual desire and for percent sexually active during stated period of time) or multiple classification analysis (for mean coital frequency). In the case of adjustment by logistic regression, the results shown represent the mean predicted probabilities based on taking into account age and gender of the respondent (as categorical variables) and the age difference between the respondent and spouse (as a continuous variable).