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Sexual Distress in Urban China:
A Population-Based National Survey of Men and Women

William L. Parish,[1 2] Ph.D. Elena Obkuhova,[1] M.A.;
Edward O. Laumann, [1] Ph.D.; Suiming Pan,[3] M.A.; Fang Li,[1] Ph.D; Tianfu Wang,[1] M.S.

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[1] Sociology Department, University of Chicago, Chicago, IL
[2] Corresponding author: 1126 E. 59th Street, Chicago, IL 60637. (tel) 847-492-1647 (fax) 847-492-8347 (email) w-parish@uchicago.edu
[3] Sociology Department, Renmin University, Beijing, China

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ABSTRACT

Using data from a national probability sample of 2,478 sexually active adults aged 20-64, this article examines the prevalence of, and risk factors for, sexual distress in urban China. Fully 35% of women and 21% of men had at least one persistent sexual issue. Chinese prevalence is comparable to the median of reports for other societies. With sharp differences for men and women, the risk factors for distress in China were multiple, with aging and physical issues only a portion of the mental health, stress, relationship, and values and knowledge issues correlated with reports of increased sexual distress.

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The last two decades have had major advances in the understanding the etiology of sexual dysfunctions. With recent pharmacological advances, the physiological emphasis in the study of sexual dysfunctions has increased, to the dismay of many (Bancroft, 2002; Hart & Wellings, 2002; Rosen & Leiblum, 1995; Rowland & Burnett, 2000; Tiefer, 1986, 2000, 2001). Much research focuses on male erectile dysfunction (Winton, 2000, 2001; Kubin & Fugl-Meyer, 2003), while female dysfunctions remain poorly understood (Bancroft, 2002; Bancroft, Loftus & Long, 2003; Everaerd et al., 2000; Basson et al., 2001). Issues in the field include whether models for men and women's sexual dysfunction must be distinct and whether many sexual issues among women can even be labeled dysfunctions (Bancroft, Loftus & Long, 2003; Basson, 2000; Basson et al., 2001; Everaerd et al., 2000; Tiefer, 1991, 2001).

Recent literature reviews (Simons and Carey, 2001; Dunn et al., 2002) bemoan the scarcity of high quality population-based surveys using consistent research methods. Moreover, the currently available data primarily cover the populations of the US and Western Europe, with only small non-representative samples for the rest of the world. This article addresses these points with an analysis of sexual issues in a national probability sample of 2,478 sexually active and other urban adults age 20-64. The different organization of sexuality in China provides a chance to evaluate competing understandings in a new social context. Among Chinese couples there is a growing emphasis on "companionate relationships" and a greater expectation of sexual enjoyment for both women and men (Evans, 1997; Ruan, 1991; Tang et al., 2001; Tang & Parish, 2000). For women, the current situation in urban China may arguably approximate those

of the U.S. in the 1970s, when women's consciousness about sexual issues was rising and the types of therapy used in clinics often emphasized cognitive awareness.

Previous Research and Hypotheses

Sexual distress has multiple sources, including couple relationships, knowledge and attitudes about sexual matters, mental health and stress, and organic and biomedical factors (Bancroft, 1999; Basson et al., 2001; Rosen & Leiblum, 1995; Wiederman, 1998).

Relationship issues

Relationship issues are considered by many to be at the heart of sexual problems (Clement, 2002; Kaplan, 1974; Masters & Johnson, 1970; Southern, 1999). A large literature suggests that, particularly for women, relationship quality, including intimacy, commitment, and communication between partners, is critical (e.g. Basson, 2000, 2001; Goddard & Brungardt, 2000; Reichman, 1998). Population-based surveys find that relationship difficulties are a risk factor for sexual problems, particularly for women (e.g. Dunn, Croft & Hackett, 1999; Morokoff & Gillillande, 1993). Open communication helps prevent sexual problems from developing (Clement, 2002), suggesting that in relationships where the couple knows each other's sexual needs, the partners are less likely to experience sexual dysfunctions. Relationship quality (particularly intimacy) could well be more important for women than for men.

Other patterns can be more important for men. Particularly for men, partner's attractiveness is an important criterion in marriage selection, including in China (Buss, 1994; Townsend, 1998; Whyte & Parish, 1984). By extension, a partner's physical attractiveness could influence sexual desire in a relationship and through desire other sexual dysfunctions. Similarly, much scholarly writing and popular wisdom suggests that while men's infidelity is grudgingly

tolerated, women's infidelity has serious repercussions for the relationship (Barash & Lipton, 2001; Buss, 1994; Townsend, 1998). These literatures suggest that for men, both the attractiveness of the sexual partner and her real or suspected infidelity greatly shape his experience of sexual dysfunctions.

Knowledge of the partner's sexual needs might also be expressed in the variety of sexual practices in a couple's sexual life. Particularly for women, a partner's greater attention to kissing, fondling, and even oral sex might arguably increase her sexual satisfaction while at the same time decreasing her reports of sexual dysfunctions. At least much of the effort in sexual counseling in the 1970s in the U.S. might lead one to expect this outcome (e.g., Masters & Johnson 1970). Nevertheless, much as in the U.S., the sexual revolution within marriage and other stable relationships need not be gladly embraced by all women, some of whom may find that new sexual culture creates elevated standards that they can not, or do not want, to live up to (e.g., Rubin, 1990, 1992).

Knowledge and values

Knowledge and values influence how people experience their sexuality. Recent research emphasizes the role of cognitive and perceptual factors in sexual dysfunctions (Janssen et al., 2000; Laan et al., 1993; Rosen et al., 1994). For example, Everaerd and colleagues (Everaerd et al., 2000; Janssen et.al., 2000) argue that genital response and subjective arousal are controlled by different mechanisms among men and women. Particularly in research on women, sexually dysfunctional individuals can experience automatic genital response, but at the cognitive level their arousal is inhibited. Approaches to therapy that emphasize increasing knowledge and developing "appropriate" sexual values via exposure to sexual materials have been moderately successful, suggesting again the intermediation role of knowledge and values (Robinson et al.,

1999; van Lankveld et al., 2001; Wiederman, 1998). Consistent with this same theme, culturally induced sexual inhibition, as can result from a strict religious upbringing, can hamper the enjoyment of sexual experience (Golden, 1985; Tiefer, 2001). Between the Communist Revolution and the liberalization of the 1980s China was characterized by extreme Puritanism, which denigrated the expression of sexuality (Ruan, 1991). Some of these beliefs could continue to influence sexuality today.

Education might play a role in changing these values. On the positive side, highly educated individuals might be less likely to possess conservative beliefs that make sexual self-expression difficult.. Some studies find that sex-related knowledge (e.g.., recognition of erogenous zones, knowledge about menstruation) is greater among higher-status women, and this is accompanied by fewer reports of dysfunctions (Garde & Lunde, 1980; Laumann, Paik, & Rosen, 1999). Conversely, education could raise the level of expectations and the ability to describe negative experiences. Western feminism is making some inroads into China – e.g., books associated with women's liberation of the 1970s, such as *Our Bodies, Our Selves*, have been translated in China. Whether this does more to increase women's sexual rewards or their sexual frustration is as yet unknown.

Mental Health and Stress

Existing research suggests that depression, emotional problems, and stress are associated with lower sexual interest and other sexual issues (e.g., Bancroft et. al, 2003; Dunn, Croft, & Hackett, 1999; Kaplan, 1977; Kubin, Wagner & Fugl-Meyer, 2003; Laumann, Paik, & Rosen, 1999). Among women, lifetime stresses, including child sex, forced sex, and sexual harassment may also lead to later difficulties (Browning & Laumann, 2001; Browning, 1997; Laumann, Paik, & Rosen, 1999; Davis & Lee, 1999; Munson, Hulin, & Drasgow, 2000; Paolucci et al,

2001). Among men, poor psychological well being, unemployment, and deteriorating economic circumstances are linked to erectile dysfunction (Feldman et al., 1994; Kubin, Wagner & Fugl-Meyer, 2003; Laumann, Paik, & Rosen, 1999; Morokoff & Gillilland, 1993).

Health Status and Age

Most sexual dysfunctions increase with age, particularly for men (Deeks & McCabe, 2001; Dunn, Croft, & Hackett, 1999; Fugl-Meyer & Fugl-Meyer, 1999; Kubin, Wagner & Fugl-Meyer, 2003; Laumann, Paik, & Rosen, 1999; Schiavi, 1999; Spark, 2000). Among men the erectile dysfunctions have a significant biological component, including aging and medical conditions such as diabetes, blood pressure medication, excess smoking, and alcoholism (Feldman et.al., 1994; Panser et.al., 1995; Schiavi , 1999; Spark, 2000; Trudel et al., 2000). Pain (or dyspareunia) is considered as the only female dysfunction whose etiology is mostly physiological (Rosen & Leiblum, 1995). Among women the consequences of menopause can cause dryness and pain, though in population survey results these consequences can be so modest as to be undetectable (Boulet et al., 1994; Deeks & McCabe, 2001; Rekers et al., 1992; Trudel, Turgeon, & Piche, 2000). Genital symptoms, such as dripping, pain during urination, etc, are associated with reports of sexual dysfunctions (Laumann, Paik, & Rosen, 1999).

Data

Samples. With the exclusion of Tibet and Hong Kong, our sample is nationally representative of the adult population of China age 20-64. This population sample was drawn probabilistically in four steps. (a) Using the 1990 National Population Census and Public Health reports of STD infection rates in different provinces and cities, China was divided into 14 strata based on size of urban population and location on the Southern and Eastern Coast (where STD

infection rates have been reported to be high) versus elsewhere. We oversampled the Coastal regions and large cities with known population weights. (b) We selected two to six administrative units (urban districts, smaller cities, counties) from each stratum, with the probability of the unit being selected being proportional to the population of that unit – providing a total of 48 primary sampling units. Our statistical software, STATA 8.0, takes into account both the 14 strata and the 48 primary sampling units when calculating standard errors and confidence intervals (Skinner, Holt, & Smith 1989). (c) On arriving at a sampling unit, each survey team arrayed the subunits in the county or city by population size and again picked one to two subunits (neighborhoods in cities, villages or towns in counties) probabilistically, with more highly populated subunits having a greater probability of being selected. (d) At the subunit based on the official household registration records all the adult population age 20-64 was arrayed in order, and 83 individuals selected by picking a random starting point and then picking every nth individual so as to provide the full number of individuals from that subunit. From these standard stratified sampling procedures, we know the population weight that has to be applied to give an estimate of behavior and infection rates in the total population as well as the sampling adjustments that must be made to correct our standard errors for sample design effects.

Interviews. Once the primary sampling units were picked, the interview teams traveled to the research sites between August 1999 and August 2000 and secured neighborhood facilities for interviews. In large cities, these facilities were typically private rooms in a neighborhood hotel. In villages and smaller towns, these facilities were rooms in a larger home or in a village meeting place. Interview team members approached people drawn in the sample, explained the purpose of the interviews, and read them an IRB-approved informed consent statement. Because so many homes have additional kin that would inhibit privacy, all respondents were asked to

come to the central interview site in the neighborhood for an interview. At the interview site, respondents participated in an hour-long interview, with the first half of the interview undertaken by the interviewer and the more sensitive second half controlled by the respondent who used a laptop computer that contained the questionnaire. Of 5,000 individuals initially sampled, 3,806 participants completed the interview and provided valid data for analyses, giving a final response rate of 76.1%. Participants and data losses were of three types: refusal to participate of some of the sampled persons (n=857, 17.1%), sampled person always absent, of poor health, too old or young (n=308, 6.2%), and computer/data handling loss (n=29, 0.6%). Among urban respondents, 11% frequently and 26% sometimes needed help from the interviewer in handling the computer. Research methods were approved by Institutional Review Boards at the principal research sites -- the University of Chicago and Renmin University.

We limit the analysis to the urban population, because of greater clarity of results in urban areas. In urban areas, 87% of all respondents were in a stable sexual relationship last year, with 98% of these relationships being with a spouse. Of these relationships, 92% were sexually active last year. Though we provide limited data on all respondents, these sexually active respondents (1,217 women and 1,261 men) are the focus of our analysis,

Results

Prevalence

In sequence, respondents were asked whether they had experienced each of the listed sexual issues during the previous 12 months, and whether the issue lasted for two months or more (for question wording, see questions KN12-KN20 in the questionnaire at URL to be supplied). This provides two sets of measures – one for persistent issues that lasted two months

or more and one for sexual issues of any duration during the previous year (table 1, top panel). Each of the occasional sexual issues are quite common, and when combined with persistent issues rise to the two-thirds to three-quarters range for women. Except for arousal and pain, about half of men report one of the issues last year. Persistent issues that lasted two-or-more months are much less common. Nevertheless, among women, one-fifth report persistent lack of interest in sex and 5 to 10% report each of the other sexual issues. Men are less afflicted either by lack of interest (11%) or by the other sexual issues (2 to 5% mostly), though 8% of men of all ages have persistent erectile issues. Attempts to group the sexual issues into subgroups showed lack of strong clustering. Accordingly, the analysis that follows examines either a simple sum of five sexual issues or specific sexual issues one-by-one. In the simple sum of five sexual issues, 35% of women and 21% of men had at least one persistent sexual issue and 96% of women and 84% of men reported at least one occasional issue.

Risk Factors

We examine 18 potential risk factors, clustered into four groups (table 1, bottom panel). So as to give the risk factors a common metric, all are recoded to range from a minimum of 0 to a maximum of 1. When the underlying scale is more finely divided (see the first numerical column), the intermediate values have fractional values between 0 and 1.

Relationship. Respondents described several aspects of their spousal or other steady sexual relationship. These included whether their relationship often, sometimes, rarely, or never involved "daily intimacies" – hugs, expressions of affection. About two-fifths of both men and women said their relationship rarely or never involved daily intimacies. Fully 34% of the men and 28% of the women said they had experienced hitting sometime during the life of their

relationship – more often with the men hitting the woman but also some mutual hitting and a few in which the wife struck the husband without his hitting back.

Suspecting that many older, less educated men were inattentive to their partner's needs, we asked the respondent whether the partner knew completely, somewhat, not much, or absolutely nothing about "how to please and satisfy you during sexual intercourse." About a fifth of both men and women reported that their partner knew little or nothing about how to satisfy them. We also asked about practices during sex – ranging from kissing (far from universal), kissing or fondling of breasts and genitals, oral sex, anal sex (rare), woman-on-top, and man behind ("doggy style"). Differentiated by male-to-female directionality and by the categories of never, sometimes, and often during the previous year, this combined index produced 36 possible degrees of varied practice. Though the young are much more adventurous than the old, many practices remain uncommon. For example, only about a fourth "often" kiss of fondle breasts and genitalia during sex. About a fourth "sometimes" engage in oral sex. Almost none report that they "often" have oral sex (details not shown).

Respondents rated their partner in (hetero)-sexual attractiveness on a four-point scale from quite unattractive to very attractive, with about half saying that their partner was not very attractive. Respondents also reported whether they "were certain" (coded 1) or "suspicious" (coded .5) that their partner had extramarital or other sexual relationships during the lifetime of their relationship. About one-fifth of women and one-seventh of men were at least suspicious

Values / Knowledge. Respondents reported whether sex in general was "dirty." A third of women and fewer men reported that sex was sometimes or often dirty, with older respondents more often giving this response. Respondents were also asked, "Some say that a wife should be responsible for the family and domestic tasks while husband should focus on career and matters outside of

the family (so-called, "men focus on the outside, women focus on the inside")." Exploratory analyses showed that it was not mild but strong disagreement with this traditional belief that had important consequences for sexual dysfunctions. Hence, we focus on the vast majority who either agree or only mildly disagree with this statement in comparison to the small tenth of the population who strongly disagree.

New beliefs are indexed by three items: These include the ability to identify a clitoris. This item was preceded by an item that asked where in general was that place on a woman's body "which, if stimulated appropriately, can easily arouse a woman to attain orgasm." The respondent could plead ignorance (as did one-third of women and one-fifth of men) or identify the head, breasts, or legs (about one-tenth of everyone). If, instead, they said the pubic area or genitalia, then, they were shown a picture on the screen with five numbered arrows pointing to different parts of a woman's genitalia. Among all respondents, including those who never got to the picture, about four-fifths of women and half of men identified the arrow pointing to the clitoris. Finally, respondents were asked their attitudes about four items regarding premarital sex, extramarital sex, and sex for pleasure (without commitment or love). The simple sum of those standardized items provides a summary scale of more liberal or sexually permissive attitudes.

Mental stress. Respondents reported whether they had trouble with sleeping, irritability, tiredness, or depression, and, in addition, their level of happiness over the last 12 months. In a factor analysis, these were combined into a single "mental stress" scale. In addition, respondents reported whether fear of pregnancy interfered with their sex life. As many as one-fourth of all women in their 20s report that it did. Respondents also reported whether they thought it possible that they would be verbally or physically sexually harassed in their daily life. Again, anticipated harassment was most common among the young. Among sexually active women in their 20s, 10% thought harassment was somewhat to very likely and 33% though it only slightly likely.

And, finally, we recorded whether the respondent had lost their job through one of the increasingly common forms of layoff that are endemic in large state-run enterprises.

Physical issues / age. Respondents reported whether they had any of four genito-urinary conditions during the last 12 months – burning during urination, ulcerated sores, genital discharge of unusual color or smell, or warts infections. These infections were common among both women (33%, much of this trichomoniasis according the respondents) and men (14%), suggesting a possibly important source of risk. Respondents also provided a self-assessment of their health, on a four-point scale. Several other behaviors (heavy smoking, heavy alcohol consumption) and conditions (diabetes, blood pressure medication) could induce male erectile problems and other dysfunctions. Because these characteristics are relatively rare in the general population, we combine them into a single "other health items scale," which has values of 0 (none), 1(one risk condition), and 2 (two or more risk conditions). On this scale, half of all men had one or more other health risks last year.

In exploratory runs, we dealt with age in a variety of ways, all of which produced results that are similar to those reported here. Here we provide linear scales, with one step for each extra year of age. First, there is a scale (spline) for those age 20-44 years of age. With a minimum of 0 and a maximum of 1.2 (all those age 45 and above get the maximum score of 1.2), coefficients from this scale show the effects of being 20 years older – age 40 rather than age 20. Second, there is a scale (spline) for the twenty-year period from age 45 to age 64, with those age 44 and below getting the minimum score of 0 (on spline regression, see Green, 2000, p. 322). Again, intuitively, regression coefficients from this scale show the effects of being 20 years older – of being age 64 rather than age 45, for example.

Age patterns

Age patterns reveal some of the underlying dynamics of sexual issues. We estimate those patterns with predicted values from a multinomial logit equation using age and age raised to the power of 2, 3 and 5 (figures 1 and 2).

First, whether people are sexually active at all varies sharply by age. In China, onset of sexually activity remains delayed. Among the young, sexual activity exceeds half the population only among people in their early 20s (subfigure 1a in both figures 1 and 2). Then, after age 50, sexual inactivity begins to increase, particularly among women, three-fifths of whom are inactive by age 64. Since some of the exit from sexual activity is voluntary, old age reports of sexual issues are, thus, likely to be understated – just as they are in most studies of sexual issues.
A parenthetical note here is that this kind of voluntary exit poses sample selectivity issues. We dealt with this in a separate set of Heckman selection models, but since they produced results similar to simpler models, it is the simpler models that we present here

Second, at least occasional lack of interest in sex is pervasive – particularly among women (subfigures 1b and 1c in figure 1). Lack of interest in sex is partly the result of no readily available sexual partner, both among the young and the old. But net of partner availability, lack of interest tends to increase with age, particularly among women – i.e., even women who remain sexually active report low interest at older ages.

Third, the classic problems of dryness (women), erectile difficulties (men), lack of arousal (pleasure), and lack of orgasm vary by intensity. The age patterns for the persistent versions of these problems are straightforward, tending to increase with age, particularly beyond age 50 and particularly for women (subfigures 2a through 2c in figure 1). Among men, the

disappearance of morning erections among the old may signal the organic onset of some of the men's problems (subfigure 2a in figure 2).

Occasional problems (i.e., any problems net of persistent problems) have less of a consistent pattern. Among women, occasional problems are so pervasive that there may be a ceiling effect that dampens variability. Among men, occasional erectile problems begin to increase slowly with age, starting at age 20. The later downturn may be a consequence of both less serious problems turning into more serious problems and of some men with problems ceasing to have sex.

Fourth, a few problems decline with age. Except for the oldest women, occasional pain is more common among the young than among the old. Other problems that decline with age are performance anxiety and, among men, premature ejaculation.

Finally, Chinese age patterns are broadly similar to those for other societies. Societal statistics vary radically, reflecting in part considerable method differences (Dunn, Jordan, Croft & Assendelft, 2002). Hence, to downplay the influence of extreme values, which may reflect only method differences, we use median rather than mean values for all the societies. We use the studies reported in Dunn, Jordan, Croft & Assendelft (2002) plus additional data from Bancroft, Loftus, and Long (2003) and the reports of persistent difficulties in this study. These sources provide information from the following numbers of societies and numbers of studies (before and after the slash mark) -- for male erectile (10/14) and premature ejaculation (5/5) and for female dryness (8/12), pain (7/10) and absence of orgasm (5/7). This approach produces the dash lines connecting solid dots in figures 1 and 2, with the dots representing averages for the age groups 20-24, 25-34, 35-44, 45-54, and 55-64. These age groups include both those in the original data reports and some estimates interpolated from those reports (for detailed data, see URL to be

supplied). Except for dryness, the median values for both women's and men's sexual issues for all studies for all societies are well within the confidence intervals for persistent issues in China.

Summary measures and risk factors

Running from 0 (no sexual issues last year) to five (had all five sexual issues), the sum of sexual issues provides material for an initial analysis of the correlates of sexual issues (table 2). We present trimmed equations, restricted to correlates that had a significance of $p<.10$ in preliminary analyses (the full equations in the appendix table 2 will later appear on a web site).

Several conclusions emerge. First, all four sets of risk factors are important. The couple's relation, values, mental stress, and physical issues enter virtually all equations. Second, gender patterns also differ in several ways. For example, in the couple's "relation," very different aspects matter for men and women. Women are more affected by daily intimacy and hitting. Men are more affected by her physical attractiveness and her adultery.

Also, values and knowledge affect men and women in very different ways. Though both men and women report more difficulties when they hold traditional values, the specific traditional values that are important differ. Women report more difficulties when they believe that "sex is dirty." Men report more difficulties when they believe that "women should stay in their traditional housekeeping roles." Moreover, increasing modern education, knowledge, and beliefs affect men and women differently. The more "modern" woman reports more difficulties. The more "modern" man reports fewer difficulties.

Men and women also respond to different stresses in life. Generalized mental distress affects men's persistent sexual issues slightly more often than among women, but on average both men and women have more sexual issues when they report generalized mental distress. As

for specific stresses in life, women are more prone to report problems – particularly when they report "fear of pregnancy" during sex and "possible sexual harassment" in daily life.

Though health issues are marginally more significant for some male sexual issues, both men and women with genitor-urinary symptoms had more sexual issues last year. Also, though there are minor variations by gender, sexual issues generally increase with age.

It is difficult to compare the relative importance of different types of risk. One way to get at that issue is to ask what happens when any set of risks – the couple's relation, values, mental stress, or physical conditions – goes from an average to a maximum value on all sub dimensions. Using the equations in table two, we can predict how many sexual issues an average person would have – where "average" is a person who has the mean values on all significant risk factors. By this procedure, the "average" woman/ man had 0.5 / 0.2 persistent sexual issues and 3.2 / 2.2 sexual issues of any duration. We then estimate relative to these "averages" how many more sexual issues a person has for each set of risks. That is, for the "at risk" person, we set all sub-dimensions of a risk type (e.g., "relations") to their maximum while holding all other risks from table 2 at a mean value.

Sexual issues of any duration vary sharply with underlying risk factors (figure 3). Including the attractiveness and adulterous behavior of his partner, relations are somewhat more important for men than for women – though this is only marginally so given the overlap in confidence intervals for the men's and women's estimates. Including education and liberal values, values are much more important for women than for men. The woman at high risk on all the value items would have almost two additional sexual issues compared to an average woman. A man high at risk on the values risks would have only 0.3 more sexual issues. However, the

more general conclusion again is that all types of risk are important. Each set of risks is associated with 0.5 to 2 more sexual issues, with the average at approximately one more sexual issue.

For persistent sexual issues, there is more overlap among types of risk (figure 4). Virtually all the 95% confidence intervals overlap. Though the consequences of mental stress are modest, particularly for women, all types of risk have broadly similar consequences. Overall, increased risks are associated with a one-fourth to one-half increase in persistent sexual issues. Or, again, what stands out is the similarity rather than the dissimilarity of the consequences of different risk sets.

Individual sexual issues and risk factors

Of course, results based on summary measures could obscure detailed patterns for specific sexual issues. Results for individual sexual issues provide a check on that possibility, while also adding information on performance anxiety and premature ejaculation (tables 3-4). The results for individual sexual issues largely parallel those for the summary measures, with a few differences:

First, the individual sexual issue equations show that for women, issues of intimacy and modern values connected to education, clitoral knowledge, and liberal sex values are most important but not for pain and dryness, which might be thought to be more physical in origin. Instead, intimacy and new values are more consistently associated with issues of pleasure (arousal) and orgasm, which might be thought of as shaped more by relational and cognitive issues (see table 3).

Second, among men the consequences of partner unattractiveness and partner adultery are quite specific, increasing both erectile difficulty and lack of orgasm – and, if she is adulterous, performance anxiety. Third, the new subset of women and men who have more varied sexual practices also have a new type of issue, performance anxiety.

Fourth, in sexual issuess, mental distress is not just a woman's issue. For issues such as interest, dryness, erections, pleasure, orgasm, and performance, mental distress increases problems for men at least as much if not more than it does for women. One of the unique additions to the stress is losing one's job, which has no effect on women, but increases men's erectile problems.

Fifth, and conversely, while men are resistant to fears of becoming pregnant during sex, women are very much affected by this concern. When worried about possible pregnancy, women have many more problems with interest, pleasure, orgasm, and performance anxiety. Among women, concerns about possible harassment typically providing an insignificant boost to all types of sexual issues (details not shown). However, the strongest expression of that concern is in reports of both occasional and persistent orgasmic sexual issues.

Sixth, while self-assessed health (and smoking, drinking, diabetes, and heart medication) has less effect on sexual issues than one might suspect, genitor-urinary symptoms during the previous year are highly related to occasional issues. Seventh, much as in earlier descriptive results, increasing age has the most consistent and strongest effects on persistent issues. In the first two decades of sexual life, occasional sexual issues such as pain and dryness often decline in prevalence (table 3). In contrast, these same sexual issues and several others strongly increase in prevalence in their persistent form – both in the first and in the last two decades of sexual life (table 4).

Finally, "my partner doesn't understand my sexual needs" is a common complaint in persistent issues. This complaint is particularly common among women (table 4).

Other possible correlates

We examined other possible risk factors. A few of these were related in intuitively meaningful ways to sexual issues. For example, when a child slept in the same bed with the respondent, women reported more dryness (OR 1.5, t=4.5) and more problems with pleasure / arousal (OR=1.3, t=3.1). Women who got help from the husband with chores reported fewer problems with pleasure / arousal (OR=0.8, t=2.7). Nevertheless, most individual items were unimportant. Where they were related, they were related to a single item (see below) in ways that could have occurred by chance alone. Hence, we have not included them in the analysis above.

The items were added one at a time to our baseline model. For each item, the number of statistically significant ($p<.05$) relationships for women/men are shown in the parentheses:

- Relation-
    - age gap. Does a woman married to a much older man have more sexual issues not because of her own characteristics but because of his? (0/0)
    - husband's help with chores. Do women have more problems with sex when they get little help from their husband, as in Hochschild (1989)? (1/0)
- Mental Stress
    - Child under age 6. (0/0)
    - Child sleeps in the same bed with husband and wife. (2/0)
    - Other adult in the same household. (0/0)

- Living environment hinders sex (self report). (1/0)
- Fear of harassment in daily life. (1/1)
- Childhood sexual contact with adult. (0/1)
- Rape (0/0)

- Health
  - Body mass index. Do overweight people have more problems? (0/1)
  - Menopause (for self or partner). (0/0)

Discussion

Limitations

As with any cross-sectional study, we are limited in the claims that we can make for causal direction. For example, causality issues could easily occur with daily intimacy, ratings of partner's sexual attractiveness, the partner's adultery, and mental distress. If so, then some of the results here overstate the role of relations and mental stress as causal factors. Moreover, we didn't get biomarkers for many other medical conditions that might affect sexual functioning – e.g., testosterone levels, diabetes. Thus, to some extent our data may understate the role of physical conditions in some sexual issues.

Cross-societal comparisons

Among women, the results for China are similar to patterns in other societies. The total of 33% of Chinese urban women who report one or more persistent sexual issues is similar to the 33-

47% range of sexual issues in five different studies from the U.S. and Europe (Bancroft, Loftus, and Long, 2003, p., 204). Irrespective of absolute prevalence levels, which can vary with minor variations in question wording, the rank order of sexual issues in prevalence is similar between China and other societies. In urban China and among women of all age groups, from the most to least common, the sexual issues are interest, orgasm, arousal, dryness, and pain – which is the same rank order as in the 1992 U.S. national study (National Family and Health Survey, raw data). Some studies for other societies report on only some of these five sexual issues. However, counting the most common issue in these studies as 1 and the least common as 5 and all intermediate issues coded at fractional ranks between these two values produces an average across societies. Including China and seven studies from the U.S. and Europe produces a rank order of sexual issues that is quite similar to the rank order for China (Bancroft, Loftus, and Long, 2003; Spira et. al., 1994; Ventegodt, 1998). The only inversion is that in the cross-national ranking, dryness is the 3rd most common and arousal issues the 4th most common – which just reverses the ranking of these two items for China. This is consistent with the individual median values by age that were displayed in figure 1. The overall conclusion, of course, is that except for differences for dryness women's sexual issues have a central tendency across societies – with lack of sexual interest being the leading issue and the experience of pain during sex being the least common issue.

Men's reports of sexual issues are also similar between China and the central tendencies in surveys from the U.S., Sweden, Denmark, France, and the Chinese data used here (Fugl-Meyer & Fugl-Meyer, 1999; Laumann, Paik & Rosen, 1999; Fugl-Meyer & Fugl-Meyer, 1999; Spira et al., 1994; Ventegodt, 1998). The median prevalence for all five countries and (following the slash mark) for China alone are 11%/11% for lack of interest, 9%/8% for

premature ejaculation, 7%/8% for erectile difficulties, and 5%/5% for orgasm difficulties. In short, no discrepancy exceeds 1 percentage point, all within the confidence interval of the Chinese data.

Sexual Issues and Dissatisfaction

Another concern is whether sexual issues can properly be termed a dysfunction unless the respondent labels the issue a problem (e.g., Bancroft, Loftus & Long, 2003; Basson, 2000; Derogatis et al., 2002). The Chinese data permit an indirect approach to this issue. Among women, reports of dissatisfaction with the physical aspect of sex with her spouse or steady sexual partner rise steadily with increasing numbers of persistent sexual issues. Listing first the number of persistent sexual issues followed by the percent dissatisfied gives the following pattern: 0 = 8% (95% CI = 4, 11), 1 = 24% (CI = 15, 33), 2 = 42% (24, 60), and 3 or more = 57% (CI = 43, 70). Large sexual issue relationships persist in a multivariate equation including many other risk factors for dissatisfaction, including age, health, his care and intimacy in daily life, whether he understands her sexual needs, and whether he is physically intimate during sex. A similar pattern is found for reports of emotional satisfaction with the woman's sex life with her primary sexual partner. Thus, while it is true that for women sexual issues are not perfectly linked to sexual satisfaction, these sexual issues are quite important for many women – suggesting that for a significant group of women, the term "dysfunction" is deserved.

Ironically, the sexual issue – dissatisfaction relationship is not as strong for men. With one or more persistent sexual issues, men's reports of dissatisfaction rise from 4% to 16%. One can speculate why this might be so, but the more general conclusion may well be that we should

be even more impressed by the size of the relationships between sexual issues and dissatisfaction for women.

Risk factors

The data produce five sets of observations about risk factors for sexual issues.

1. Multi-source. Though limited by a cross-sectional study design and self-reports of health and other conditions, the evidence from the study support a view that none of the major types of risk can be ignored. The couple's relationship, the individual's (particularly the woman's) values and knowledge, mental stress, and age and health conditions all contribute to sexual issues, and in roughly similar amounts. Critics who complain about the over-medicalization of current approaches should, of course, feel vindicated by these results.

2. Value / Knowledge. One of the striking finding emerging from the data is the importance knowledge and values play in the etiology of sexual issues, particularly for women. First, our results confirm the expectation that cultural prohibitions can restrict expression of sexuality and lead to the experience of sexual issues. More surprisingly, the results suggest that increasing sexual liberation can be accompanied by an increase in sexual issues. For women, increased education, knowledge of clitoris and liberal sexual values are associated with an increased prevalence of sexual issues. We also find a similar relationship for premature ejaculation for men. These findings are consistent with an emphasis on the importance of subjective factors in the experience of sexuality and, in particular, female sexuality (Everaed et al., 2000) and premature ejaculation in men (Laumann, Paik, & Rosen, 1999). In sum, the results suggest a pattern of increasing sexual liberation accompanied by rising expectations that are largely unmet.

We speculate that the reason that the rising expectations are largely unmet is the persisting patriarchal relationships in the family. With respect to the division of labor in the household in the U.S., Hochschild (1989) argues that women's consciousness changed much faster than men's, exacerbating intra-household conflicts over the allocation of household chores. We suspect that analogous mismatched changes are taking place in the arena of sexuality in China: both men and women are becoming more liberal with respect to sex, but men are unable or unwilling to meet women's demand for sexual equality. Another possible factor is women find the need to conform to liberal sexual ideas difficult, either because of more conservative beliefs or because of household burdens. Rubin (1992) describes that US women considered their husbands greater attentiveness to wife' sexuality a mixed blessing. Women felt that their husbands now expected the woman not only to participate, but also to participate actively and "enjoy herself." This explains why we find that sexual variety increases reports of sexual issues for women.

The finding that increase in sexual variety is associated with greater reports of sexual issues for women needs to be interpreted in this context. We suggest that sexual experimentation inspired in part by men's exposure to pornography and commercial sex. Women might be finding it difficult to meet their husbands more diverse sexual demands, either because of women's more conservative ideas or because women are overburdened with work and household responsibilities.

3. Couple's relationship. Our results lend credence to the old insight of the clinical therapy (Masters and Johnson, 1970) that sexual issues are not an individual, but a couple problem. Unfortunately, for the therapist, the exact nature of the problem varies by gender, requiring perhaps that the therapist adopt different approaches with each person in the

relationship. As in many accounts, women are more affected by daily intimacies in the relationship. Men are more affected by the wife's physical attractiveness and her infidelity. Both are affected by the partner's insensitivity to his / her sexual needs..

4. Mental health and stress. Our results are consistent with findings from other clinical and non-clinical research that depression and stress are associated with sexual issues (e.g. Dunn, Croft, & Hackett, 1999; Laumann, Paik, & Rosen, 1999). For women, fear of pregnancy and anticipation of sexual harassment increased some sexual issues. Since the eighties China has had a one child policy. Furthermore, even for the first pregnancy most couples need an official permission from their work places. While the "high tide" period of the implementation with coerced abortions is over, women's bodies remain an important target of the policy, which might make it difficult for women to think positively about sex (Evans, 1997:118-119). Sexual harassment, usually verbal, appears to be an increasing issue in large cities, particularly among the young. For men, loss of status (i.e. losing a job) is associated with erectile problems.

5. Age/health. For both men and women we observe that some sexual issues are more prevalent at the youngest ages (dryness and pain for women and pain for men), which we attribute to the inexperience and experimentation characteristic of younger couples – which also emerges in some U.S. and European studies (e.g., Dunn, Croft, & Hackett, 1999; Laumann, Paik & Rosen, 1999), Beyond age 50, most sexual issues increase steadily with age, even in the face of some people simply ceasing to engage in unsatisfying sex. With regard to health, the surprise perhaps is that the relationship is not stronger or more uniform across different sexual issues. Male erectile dysfunction is the most consistently affected, with not only reported health status but also health behaviors such as smoking and alcohol consumption and reported conditions such as diabetes and blood pressure medication influencing erectile function. What are much stronger

and more consistent in effects are experiences of genitor-urinary infections, suggesting perhaps one point of intervention for public health efforts.

Conclusion

In many ways parallel to results for other societies, these new national population-based results for urban China suggest that sexual issues are widespread. With perhaps only slightly greater importance for values and knowledge, many of the risk factors for sexual distress are also shared across societies. Mental distress, age, and poor communication (producing the report that my partner does not understand my sexual needs) are risk factors common to both men and women. Other risk factors are more distinct by gender. Among women, these additional gender-specific risk factors include absence of daily intimacy from the partner, hitting, fear of pregnancy, genitor-urinary symptoms, anticipation of sexual harassment, the belief that sex is dirty, and her increased education and liberal sexual values. Among men, additional risk factors include his partner's sexual unattractiveness and her adultery, his belief that women should stay in their traditional roles, and his poor health. The multiplicity of risk factors for men and women suggest, first, a need for a holistic approach to sexual issues -- a medical model emphasizing physiological conditions alone is insufficient. Similarly, the list of gender-specific risk factors suggests that male-based models of dysfunction alone are insufficient.

References

Bancroft, J. (1999). Sexual science in the 21st century: Where are we going? A personal note. *The Journal of Sex Research, 36*(3), 226-229.

Bancroft, J. (2002). The medicalization of female sexual dysfunction: The need for caution. *Archives of Sexual Behavior, 31*(5), 451-455.

Bancroft, J., Janssen, E., Strong, D., Carnes, L., Vukadinovic, Z., & Long, J. S. (2003). The Relation between Mood and Sexuality in Heterosexual Men. *Archives of Sexual Behavior, 32*(3), 217-230.

Bancroft, J., Loftus, J., & Long, J. S. (2003). Distress About Sex: A National Survey of Women in Heterosexual Relationships. *Archives of Sexual Behavior, 32*(3), 193-208.

Barash, D. P., & Lipton, J. E. (2001). *The myth of monogamy: Fidelity and infidelity in animals and people*. New York: W. H. Freeman and Company.

Basson, R. (2000). The female sexual response model. *Journal of Sex & Marital Therapy, 26*, 51-65.

Basson, R. (2001). Using a different model for female sexual response to address women's problematic low sexual desire. *Journal of Sex and Marital Therapy, 27*, 359-403.

Basson, R., Berman, J., Burnett, A. L., Derogatis, A., Ferguson, D., Fourcroy, J., Goldstein, I., Craziottin, A., Heiman, J., Laan, E., Leiblum, S. R., Padma-Nathan, H., Rosen, R., Segraves, K., Segraves, R. T., Shabsigh, R., Sipski, M., Wagner, G., & Whipple, B. (2001). Report of the international consensus development conference on female sexual dysfunction: Definitions and classifications. *Journal of Sex and Marital Therapy, 27*, 83-94.

Boulet, M. J., Oddens, B. J., Lehert, P., Vemer, H. M., & Visser, A. (1994). Climacteric and menopause in seven south-east asian countries. *Maturitas, 19*, 157-176.

Browning, C. (1997). Sexual contact between children and adults: A life course perspective. *American Sociological Review, 62*(4), 540-560.

Browning, Christopher R., and Edward O. Laumann. 2001. Sexual contact between children and adults: a life-course perspective. In *Sex, Love, and Health in America*, edited by E. O. Laumann and R. T. Michael. Chicago: University of Chicago Press.

Buss, D. M. (1994). *The evolution of desire : Strategies of human mating*. New York: Basic Books.

Clement, U. (2002). Sex in long-term relationships: A systemic approach to sexual desire problems. *Archives of Sexual Behavior, 31*(3), 241-246.

Davis, P., & Lay-Yee, R. (1999). Early sex and its behavioral consequences in New Zealand. *Journal of Sex Research, 36*(2), 135-144.

Deeks, A. A., & McCabe, M. P. (2001). Sexual function and the menopausal woman: The importance of age and partner's sexual functioning. *Journal of Sex Research, 38*(3), 219-225.

Derogatis, L. R., Rosen, R., Leiblum, S., Burnett, A., & Heiman, J. (2002). The Female Sexual Distress Scale (FSDS): Initial Validation of a Standardized Scale for Assessment of Sexually Related Personal Distress in Women. *Journal of Sex & Marital Therapy, 28*, 317-330.

Dunn, K. M., Croft, P. R., & Hackett, G. I. (1999). Association of sexual problems with social, psychological, and physical problems in men and women: A cross sectional population survey. *Journal of Epidemiology and Community Health, 53*, 144-148.

Dunn, K. M., Jordan, K., Croft, P. R., & Assendelft, W. J. J. (2002). Systematic Review of Sexual Problems: Epidemiology and Methodology. *Journal of Sex and Marital Therapy, 28*(5), 399-422.

Evans, H. (1997). *Women and sexuality in China: Female and gender since 1949*. New York: Continuum Publishing.

Everaerd, W., Ellen T. M. Laan, Stephanie Both, and Jannecke van der Velde. (2000). Female sexuality. In L. T. Szuchman & F. Muscarella (Eds.), *Psychological perspectives on human sexuality* (pp. 101-1476). New York: John Wiley.

Feldman, H. A., Goldstein, I., Hatzichristou, D. G., Krane, R. J., & McKinlay, J. B. (1994). Impotence and its medical and psychosocial correlates: Results of the massachusetts male aging study. *The Journal of Urology, 151*(January), 54-61.

Fugl-Meyer, A. R., & Fugl-Meyer, K. S. (1999). Sexual disabilities, problems and satisfaction in 18-74 year old swedes. *Scandinavian Journal of Sexology, 2*(2), 79-105.

Garde , K., & I. Lunde. (1980). Female sexual behavior: A study in a random sample of 40-year-old women. *Maturitas*, 2, 225-240.

Goddard, J. & K. Brungardt. (2000). *Lesbian sex secrets for men: What every man wants to know about making love to a woman and never asks.* New York: Plume Books .

Golden 1985

Hart, G., & Wellings, K. (2002). Sexual behaviour and its medicalisation: In sickness and in health. *British Medical Journal, 324*, 896-900.

Hochschild, A. (1989). *The second shift*. New York: Avon Books.

Janssen, E., Everaerd, W., Spiering, M., & Janssen, J. (2000). Automatic processes and the appraisal of sexual stimuli: Toward an information processing model of sexual arousal. *The Journal of Sex Research, 37*(1), 8-23.

Kaplan, H. S. (1974). *The new sex therapy: Active treatment of sexual dysfunctions*. New York: Brunner/Mazel.

Kaplan, H. S. (1977). Hypoactive sexual desire. *Journal of Sex and Marital Therapy, 3*, 3-9.

Kingsberg, S. A. (2002). The impact of aging on sexual function in women and their partners. *Archives of Sexual Behavior, 31*(5), 431-437.

Kubin, M., Wagner, G., & Fugl-Meyer, A. R. (2003). Epidemiology of erectile dysfunction. *International Journal of Impotence Research, 15*(1), 63-71.

Laan, E., Everaerd, W., van Aanhold, M., & Rebel, M. (1993). Performance demand and sexual arousal in women. *Behaviour Research and Therapy, 31*, 25-35.

Laumann, E. O., Paik, A., & Rosen, R. C. (1999). Sexual dysfunction in the united states: Prevalence and predictors. *Journal of the American Medical Association, 281(6),* 537-544.

Masters, W. H., & Johnson, V. E. (1970). *Human sexual inadequacy*. Boston: Little, Brown and Company.

Morokoff, P. J., & Gillilland, R. (1993). Stress, sexual functioning, and marital satisfaction. *Journal of Sex Research, 30*(1), 43-53.

Munson, L. J., Hulin, C., & Drasgow, F. (2000). Longitudinal analysis of dispositional influences and sexual harassment: Effects on job and psychological outcomes. *Personnel Psychology, 53*, 21-46.

Panser, L. A., Rhodes, T., Girman, C. J., Guess, H. A., Chute, C. G., Oesterling, J. E., Lieber, M. M., & Jacobsen, S. J. (1995). Sexual function of men ages 40 to 79 years: The Olmsted County study of

urinary symptoms and health status among men. *Journal of American Geriatrics Society, 43*, 1107-1111.

Paolucci, E. O., Genuis, M. L., & Violato, C. (2001). A meta-analysis of the published research on the effects of child sexual abuse. *The Journal of Psychology, 1351*, 117-136.

Rekers, H., Drogendijk, A. C., Valkenburg, H. A., & Riphagen, F. (1992). The menopause, urinary incontinence and other symptoms of the genito-urinary tract. *Maturitas, 15*, 101-111.

Reichman, J. (1998). *I am not in the mood.* New York: Harpercollins.

Robinson, B. B. E., Manthei, R., Schltema, K., Rich, R., & Koznar, J. (1999). Therapeutic uses of sexually explicit materials in the United States and the Czech and Slovak republics: A qualitative study. *Journal of Sex & Marital Therapy, 25*(103-119).

Rosen, R. C., & Leiblum, S. R. (1995). Treatment of sexual disorders in the 1990s: An integrated approach. *Journal of Consulting and Clinical Psychology, 63*(6), 877-890.

Rosen, R. C., Leiblum, S. R., & Spector, I. P. (1994). Psychologically based treatment for male erectile disorder: A cognitive - interpersonal model. *Journal of Sex & Marital Therapy, 20*, 67-85.

Rowland, D. L., & Burnett, A. L. (2000). Pharmacotherapy in the treatment of male sexual dysfunction. *The Journal of Sex Research, 37*(3), 226-243.

Ruan, F. F. (1991). *Sex in china*. New York: Plenum.

Rubin, L. B. (1990). *Erotic wars: What happened to the sexual revolution?* New York.: Farrar, Straus & Giroux.

Rubin, L. B. (1992). *Worlds of pain: Life in the working class family*. New York: Basic Books.

Schiavi, R. C. (1999). *Aging and male sexuality*. Cambridge, U.K. ; New York: Cambridge University Press.

Simons, J. S., & Carey, M. P. (2001). Prevalence of sexual dysfunctions: Results from a decade of research. *Archives of Sexual Behavior, 302*, 177-219.

Southern, S. (1999). Facilitating sexual health: Intimacy enhancement techniques for sexual dysfunction. *Journal of Mental Health Counseling, 21*(1), 15-32.

Spark, R. F. (2000). *Sexual health for men: The complete guide*. Cambridge, MA: Perseus.

Tang, W.-F., & Parish, W. L. (2000). *Chinese Urban Life Under Reform: The Changing Social Contract*. New York: Cambridge University Press.

Spira, A., Bajos, N., Groupe ACSF., & France. Ministère de la recherche et de l'espace. (1994). *Sexual Behaviour and AIDS*. Aldershot ; Bookfield, USA: Avebury.

Tang, S.-k. C., Wong, C.-y., & Lee, A. M. (2001). Gender-related psychosocial and cultural factors associated with condom use among Chinese married women. *AIDS Education and Prevention, 13*(4), 329-342.

Tiefer, L. (1986). In pursuit of the perfect penis: The medicalization of male sexuality. *American Behavioral Scientist, 29*(5), 579-599.

Tiefer, L. (1991). Historical, scientific, clinical and feminist criticisms of "the human sexual response cycle" model. *Annual Review of Sex Research, 2*, 1-23.

Tiefer, L. (2000). Sexology and the pharmaceutical industry: The threat of co-optation. *The Journal of Sex Research, 37*(3), 273-283.

Tiefer, L. (2001). A new view of women's sexual problems: Why new? Why now? *The Journal of Sex Research, 38*(2), 89-96.

Townsend, J. M. (1998). *What women want--what men want : Why the sexes still see love and commitment so differently*. New York: Oxford University Press.

Trudel, G., Turgeon, L., & Piche, L. (2000). Marital and sexual aspects of old age. *Sexual and Relationship Therapy, 154*, 381-406.

van Lankveld, J. J. D. M., Everaerd, W., & Grotjohann, Y. (2001). Cognitive-behavioral bibliotherapy for sexual dysfunctions in heterosexual couples: A randomized waiting-list controlled clinical trial in the Netherlands. *The Journal of Sex Research, 38*(1), 51-67.

Ventegodt, S. (1998). Sex and the quality of life in Denmark. *Archives of Sexual Behavior, 27*(3), 295-307.

Whyte, M. K., & Parish, W. L. (1984). *Urban life in contemporary china*. Chicago: University of Chicago Press.

Wiederman, M. W. (1998). The state of theory in sex therapy. *The Journal of Sex Research, 35*(1), 88-99.

Winton, M. A. (2000). The medicalization of male sexual dysfunctions: An analysis of sex therapy journals. *Journal of Sex Education and Therapy, 25*, 231-239.

Winton, M. A. (2001). Gender, sexual dysfunctions, and the journal of sex & marital therapy. *Journal of Sex and Marital Therapy, 27*(4), 333-337.

Table 1. Descriptive Statistics for Sexual Issues and Risk Factors

	total categories	means women	means men	min.	max.
Sexual Issues					
Sexual Issues (any last year)					
Sum of 1st five sexual issues	6	3.40^	2.22	0	5
Lack of interest	2	0.75^	0.53	0	1
Pain during sex	2	0.61^	0.25	0	1
Dryness (women) / Erectile difficulties (men)	2	0.65	0.58	0	1
Lack of pleasure / arousal	2	0.65^	0.35	0	1
Lack of orgasm	2	0.74^	0.52	0	1
Performance anxiety	2	0.36	0.49*	0	1
Premature ejaculation (men only)	2	-.-	0.69	0	1
Persistent Sexual Issues (2 months or longer)					
Sum of 1st five sexual issues	6	0.55^	0.29	0	5
Lack of interest	2	0.22^	0.11	0	1
Pain during sex	2	0.05	0.02	0	1
Dryness (women) / Erectile difficulties (men)	2	0.07	0.08	0	1
Lack of pleasure / arousal	2	0.09^	0.03	0	1
Lack of orgasm	2	0.11^	0.05	0	1
Performance anxiety	2	0.03	0.04+	0	1
Premature ejaculation (men only)	2	-.-	0.08	0	1
Risk Factors					
Couple's relation					
Daily intimacy absent	4	0.43	0.39	0	1
Hitting, of/by spouse/partner (ever)	2	0.28	0.34^	0	1
Sexual needs unknown (by partner)	4	0.31	0.34+	0	1
Sexual practices varied (oral sex, etc.)	36	0.35	0.43^	0	1
Unattractive Partner	4	0.49	0.50	0	1
Adulterous partner, ever in relationship (no, perhaps, definitely)	3	0.13^	0.08	0	1
Values / Knowledge (of respondent)					
Sex is dirty (in general)	3	0.31^	0.26	0	1
Women stay in traditional roles (as in, "stay in the kitchen")	2	0.89	0.91	0	1
Education	6	0.48	0.51^	0	1
Identifies clitoris (in picture)	2	0.38	0.55^	0	1
Liberal sex values (premarital sex, etc.)	30	0.30	0.45^	0	1
Mental Stress					
Mental distress	75	0.24	0.24	0	1
Fear of pregnancy (during sex)	2	0.13^	0.09	0	1
Harassment possible (verbal or physical)	4	0.13	0.14	0	1
Lost job	2	0.07	0.07	0	1
Physical Issues / Age					
Genito-urinary symptoms (burning, discharge, etc.)	2	0.33	0.14	0	1
Health poor (self-assessed)	5	0.32	0.30	0	1
Other health items (smoking, drinking, etc.)	3	0.03	0.33	0	1
Age 20-44 (linear by year)	25	0.84	0.88	0	1.2
Age 45-64 (linear by year)	20	0.13	0.18^	0	1

Notes: Data for urban women (n<=1,217) and men (n<=1,261) who were sexually active with a steady sexual partner (95% are spouse) during the last 12 months. Both means and tests of statistical differences adjusted for sample design. ^ $p<.05$ + $p<.10$, when a mean is larger than for the opposite sex. Genito-urinary symptoms include any of the following during the previous 12 months: burning during urination, ulcerated sores, genital discharge of unusual color or smell, or warts infections. File: MeanTabw3d

Table 2. Correlates of Sexual Issue Sums

(incidence rate ratios)

	Any Duration		Persistent (2+ months)	
	Women	Men	Women	Men
Couple's Relation				
daily intimacy absent	1.19 *	--	1.68 *^	--
any hitting	1.07 *	--		--
sexual needs unknown	--	1.31 *	2.15 *	2.24 *
partner unattractive	--	1.28 ^	--	2.91 *^
partner had other partner	--	1.27 +	--	--
Values / Knowledge				
sex is dirty	1.15 *	1.15 +	1.49 *^+	--
women stay in place	--	1.48 *^	--	3.43 *^
education	1.44 *^+	--	1.25 ^	0.60 +
identifies clitoris	--	--	--	0.62 *
liberal sex values	1.22 *^	--	--	--
Mental Stress				
mental distress	1.28 *	1.69 *	--	2.11 *^+
fear of pregnancy	1.17 *	--	--	--
harassment possible	1.21 *	--	1.68 *	--
Physical Issues / Age				
genito-urinary symptoms	1.05 *	1.25 *^	--	
health poor	--	1.21 +	--	2.51 *^+
age 20-44	0.95	1.14 *	2.27 *	1.71
age 45-64	1.31 *	0.97	1.82 +	2.06 *
Observations	(1164)	(1184)	(1164)	(1194)

Note: Negative binomial regression results for the sum of five "classic" sexual issues -- lack of interest, pain, dryness (women) /erectile (men) difficulties, lack of arousal, and lack of orgasm. Ratios trimmed from equation when failed to reach .10 level of significance. * p<.05 + p<.10 (for individual ratios). ^ p<.05 ^+ p<.10 (for whether greater than ratio for the opposite sex). Coefficients and standard errors adjusted for sample design. Samples of urban residents who had a spouse or other steady sexual partner with whom they had sex last year.

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Table 3. Correlates of Sexual Issues of Any Duration

	Lack of interest		Pain		Dry-ness	Erec-tile diffi-culties	Lack of pleasure/ arousal		Lack of orgasm		Perform-ance anxiety		Prema-ture ejacu-lation
	w	m	w	m	w	m	w	m	w	m	w	m	m
Couple's Relation													
daily intimacy absent	3.24**	1.83*					2.59*	1.59*	2.70**				
	(5.8)	(2.3)					(2.1)	(2.0)	(3.4)				
hitting				1.37+	1.54**		1.48**						1.93**
				(1.7)	(3.4)		(3.0)						(3.4)
sexual needs unknown										2.42**		2.10*	
										(4.6)		(2.1)	
sexual practices varied	e	e	2.82+								2.44**	5.51**	
			(1.8)								(3.1)	(2.9)	
unattractive partner						2.83*				2.37*			
						(2.2)				(2.2)			
adulterous partner						2.08*				2.93*		3.17**	
						(2.7)				(2.2)		(3.8)	
Values / Knowledge													
sex is dirty			2.07*		2.17**		2.86**				1.86**		
			(2.4)		(3.0)		(2.7)				(5.4)		
women stay in place		2.56**		2.09*		1.96*		1.80*		2.25**			1.80*
		(2.9)		(2.5)		(2.1)		(2.4)		(6.1)			(2.6)
education	4.72*		2.94*				2.81*		5.59+				
	(2.5)		(2.5)				(2.9)		(2.0)				
identifies clitoris					1.33*				1.78**				1.63+
					(2.1)				(4.0)				(1.8)
liberal sex values							3.83**						1.70+
							(2.7)						(1.9)
Mental Stress													
mental distress	3.34**	2.68**			3.15+	2.42+		6.20**		4.28**	2.33**	9.92**	3.20*
	(2.9)	(2.8)			(1.8)	(1.7)		(3.6)		(4.4)	(2.9)	(5.9)	(2.0)
fear of pregnancy	3.35**						2.94**		3.78**		2.49*		
	(3.2)						(5.2)		(4.3)		(2.1)		
harassment possibility (f)						2.82*			10.7**				
/ lost job (m)						(2.2)			(3.8)				
Physical Issues / Age													
genito-urinary symptoms		e	1.69***	3.54**		2.30**	1.62**	1.70**		1.57**		1.46+	
			(6.6)	(6.4)		(3.8)	(3.2)	(3.5)		(3.2)		(1.7)	
health poor		2.75**		1.82		2.27+							
		(3.1)		(1.6)		(1.9)							
age 20-44	1.78	1.55+	0.48*	0.56**	0.58*	2.73**	1.78+	1.00	0.61	1.32	1.00	0.96	1.02
	(1.6)	(1.8)	(2.7)	(2.6)	(2.3)	(3.6)	(1.8)	(0.0)	(0.8)	(1.1)	(0.0)	(0.1)	(0.1)
age 45-64	2.77+	0.91	1.88	0.61	6.10**	0.91	1.35	0.92	2.4	0.85	0.92	0.62	0.31**
	(1.9)	(0.2)	(1.5)	(1.2)	(3.5)	(0.2)	(0.4)	(0.3)	(1.4)	(0.5)	(0.2)	(1.1)	(2.9)
Observations	1196	1233	1177	1201	1168	1186	1175	1200	1173	1192	1174	1199	1201

Notes: w = women, m = men. Odds ratios (and t statistics) from logistic regressions. Except for age, the equations are trimmed to only those items that had a p value of .10 or less in trial runs. Sexual dysfunctions are based on reports of difficulty of any duration in the previous 12 month, in a sample of sexually-active urbanites with a steady sexual partner. Standard errors are adjusted for sample design. + $p < .10$; * $p < .05$; ** $p < .01$. e indicates excluded from equation, typically because of suspected reverse causation.

file: summary odds 5

Table 4. Correlates of Persistent Sexual Issues

	Lack of interest		Pain		Dry-ness	Erec-tile diffi-culties	Lack of pleasure/ arousal		Lack of orgasm		Perform-ance anxiety		Prema-ture ejacu-lation
	w	m	w	m	w	m	w	m	w	m	w	m	m
Couple's Relation													
daily intimacy absent	2.31** (4.5)						2.11+ (1.9)	3.12* (2.2)					
hitting							1.86* (2.2)						
sexual needs unknown	2.69* (2.2)	3.01** (2.8)			2.65** (2.8)		5.33** (5.3)		3.76+ (2.0)	2.01* (2.8)			
unattractive partner		3.49+ (1.9)				4.73* (2.3)				1.03+ (1.9)			
adulterous partner				19.22** (5.5)									
Values / Knowledge													
sex is dirty	1.52* (2.0)		2.69* (2.1)								2.68** (3.3)		
women stay in place		6.01** (3.0)											5.93** (2.8)
education							4.51** (2.8)						
identifies clitoris	1.56* (2.3)												
Mental Stress													
mental distress		4.58** (3.7)										13.71** (6.1)	8.55** (3.0)
harassment possibility									5.15** (4.6)				
Physical Issues / Age													
genito-urinary symptoms													
health poor				18.20+ (1.9)		7.36+ (1.8)							
other health items						2.83** (3.7)							
age 20-44	1.84 (1.5)	1.31 (1.0)	4.45* (2.7)	9.99+ (1.7)	7.88** (4.2)	5.21* (2.0)	2.98* (2.4)	8.22** (3.2)	1.3 (0.5)	1.73 (1.4)	2.98+ (1.7)	1.2 (0.2)	1.78 (0.8)
age 45-64	2.62* (2.1)	2.40* (2.5)	0.91 (0.1)	0.13+ (1.9)	2.40* (2.1)	2.36* (1.8)	2.41 (1.3)	1.24 (0.2)	5.95** (4.0)	1.34 (1.4)	0.29 (1.0)	1.9 (0.7)	1.26 (0.4)
Observations	1196	1225	1178	1212	1168	1186	1175	1210	1172	1203	1174	1211	1201

Notes: w=women, m=men. Sexual dysfunctions that persisted 2 months or more during last 12 months. + p < .10; * p < .05; ** p < .01. Also see notes to table 3.

file: summary odds 5

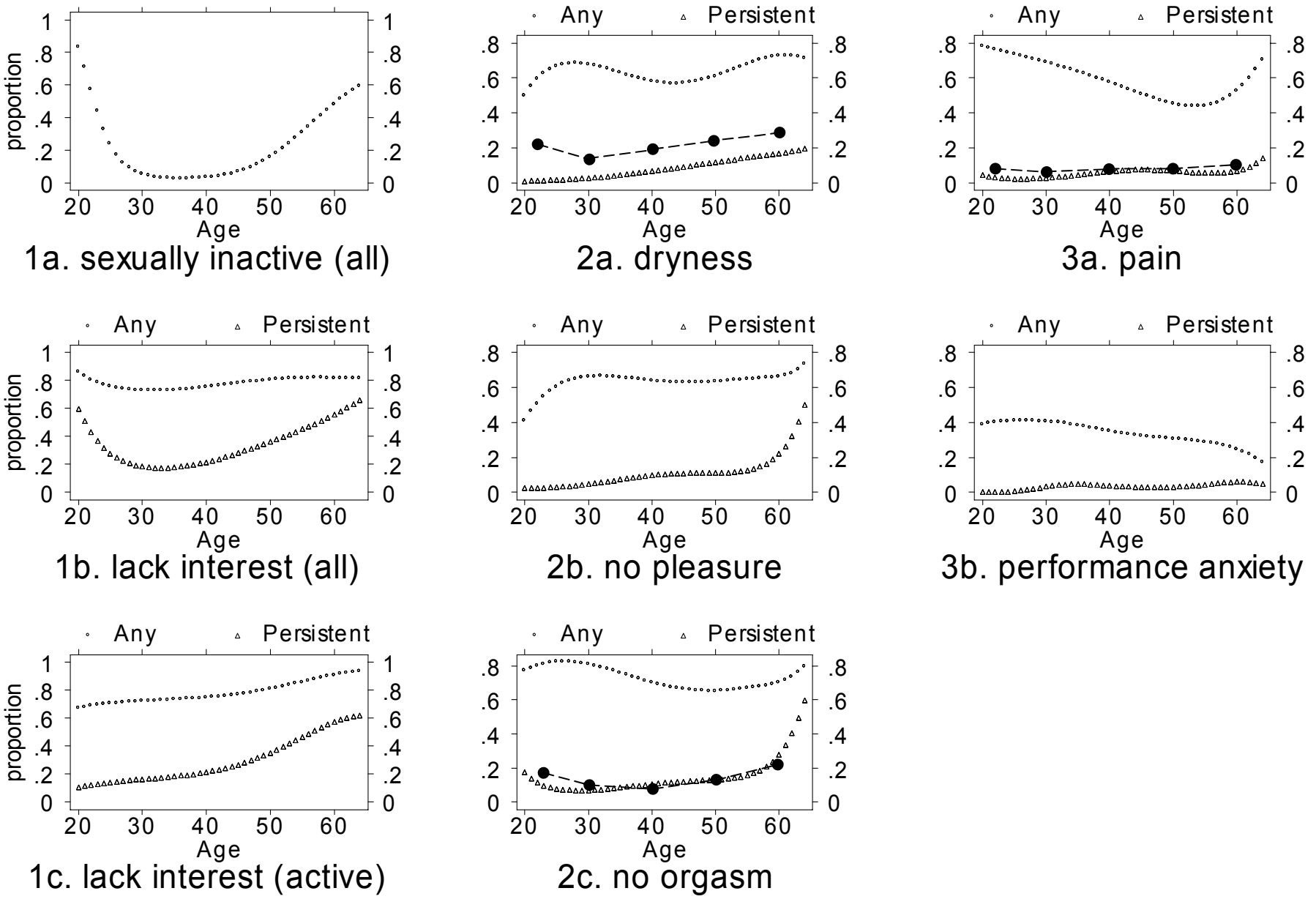

Figure 1. Sexual Issues by Age, Women

Notes: With the exception of graphs 1a and 1b for all women, the graphs are limited to sexually active women. "Persistent" indicates an issue that last for two or more months last year. "Any" indicates an issue of any duration, including persistent issues. Dashed line indicates median of persistent issues in all societies.

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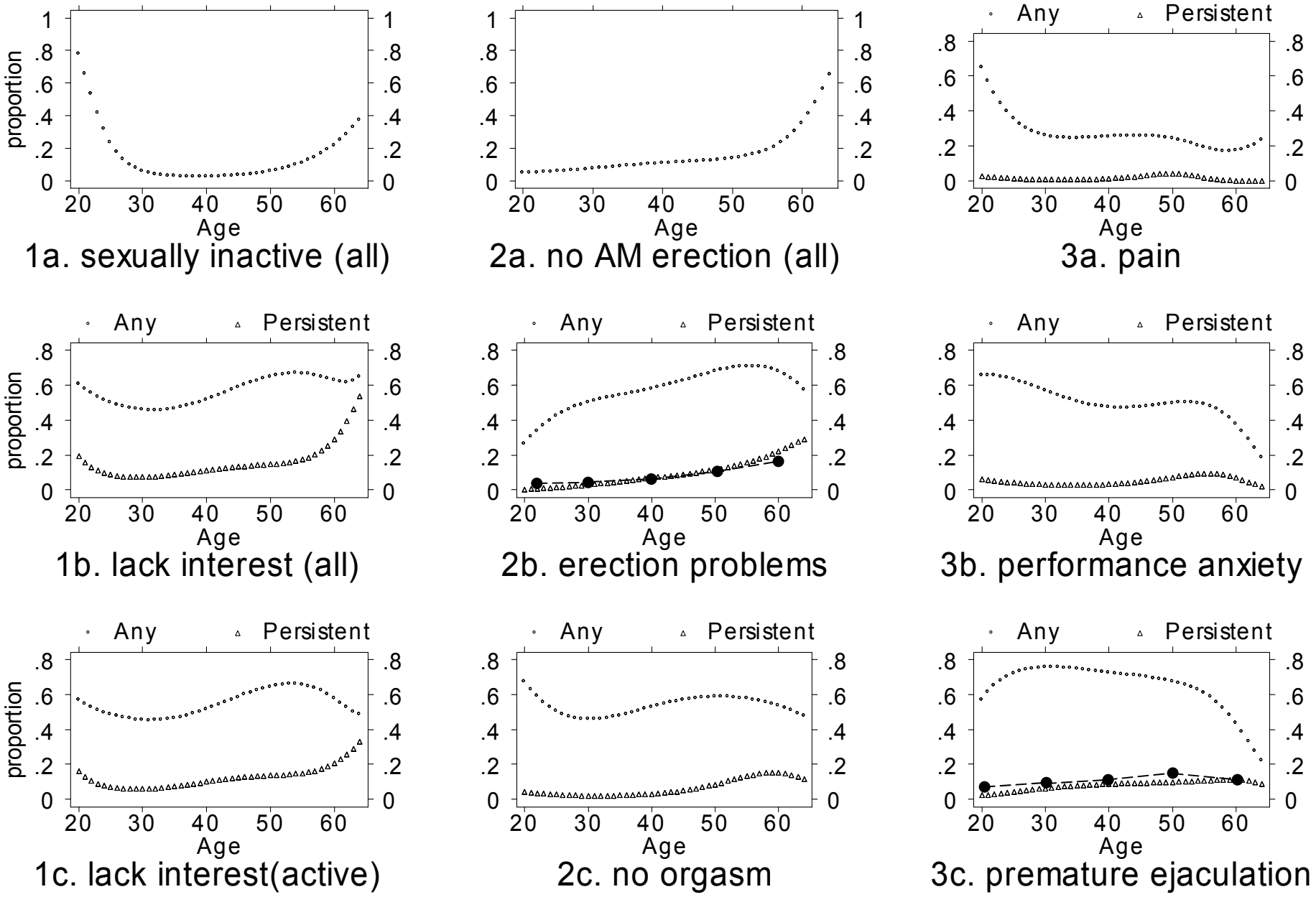

Figure 2. Sexual Issues by Age, Men

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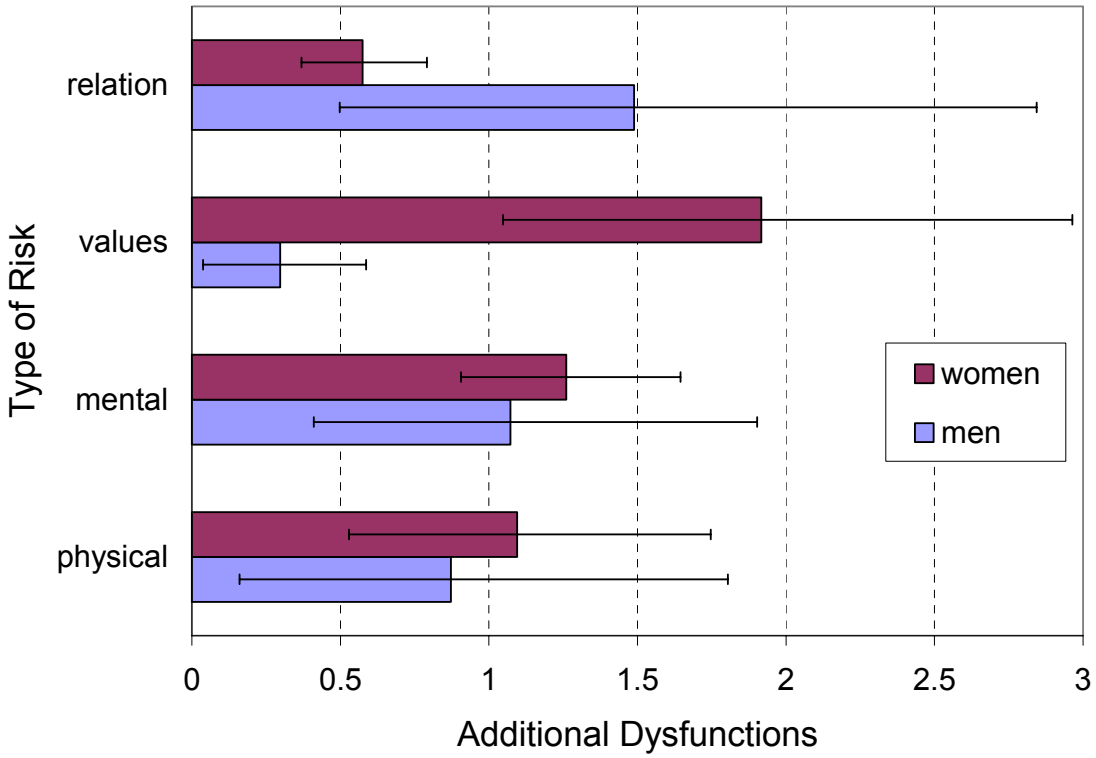


Figure 3. Additional Sexual Issues of Any Duration

Notes: Using the number of sexual issues of any duration predicted by the equations in table 2, this figure shows how many additional issues can be expected when any set of risk factors increases from an average value to a maximum value. The comparison is to a hypothetical person with average values on all risk factors. The hypothetical average woman has 3.2 dysfunctions and the hypothetical man 2.2 dysfunctions. The thin, capped lines indicate 95% confidence intervals.

files: dyspers5.do, added dysf A.xls, fig 3b.doc

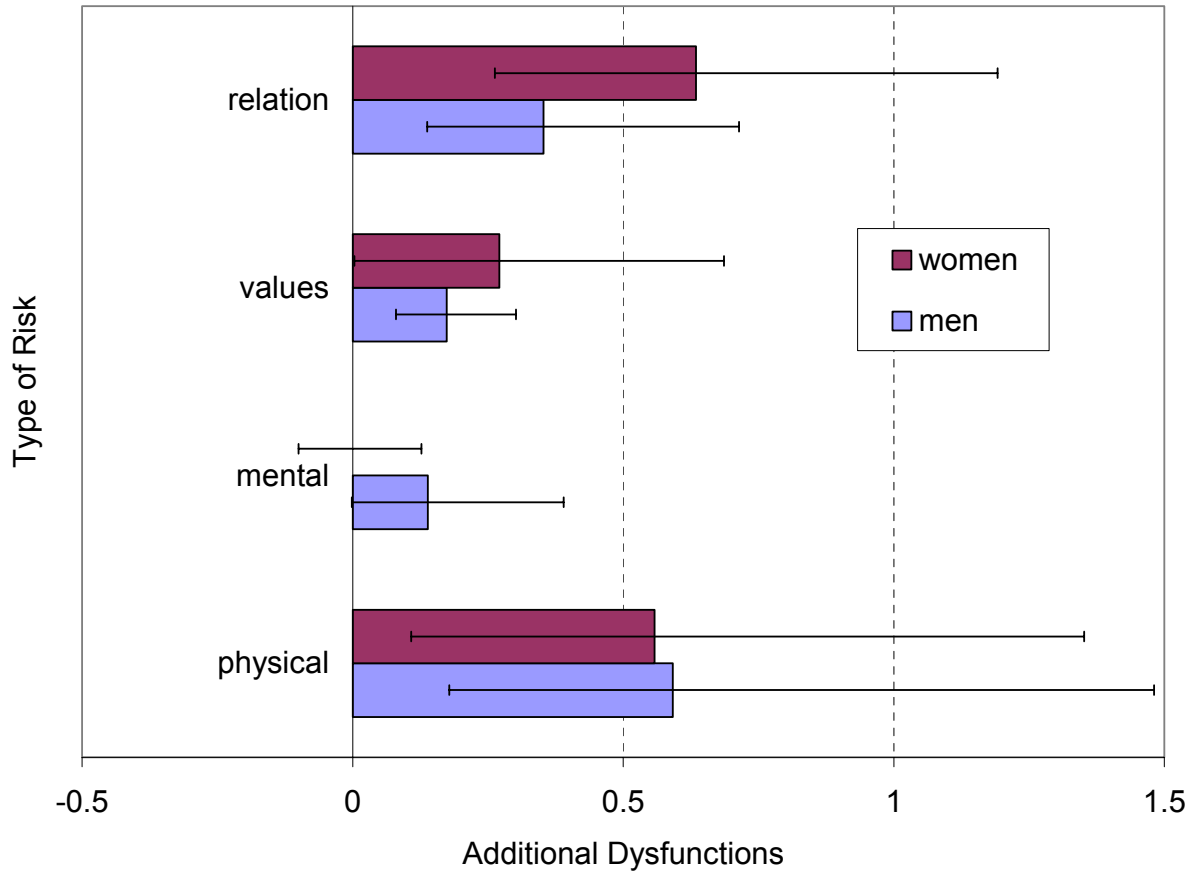


Figure 4. Additional Persistent Sexual Issues

Notes: Using the number of persistent issues (2+ months duration) predicted by the equations in table 2, this figure shows how many additional dysfunctions can be expected when any set of risk factors increases from an average value to a maximum value. The comparison is to a hypothetical person with average values on all risk factors. The hypothetical average woman has 0.5 dysfunctions and the hypothetical man 0.2 dysfunctions. The men's risk factors are inverted here to indicate the effects of no education and ignorance of the clitoris. The age effect embedded in "physical risk" is the comparison between a 64 and a 40-year-old individual. The thin, capped lines indicate 95% confidence intervals.

files: dyspers5.do, added dysf A.xls (cht. 3), fig 4b.doc

Appendix I

Not for journal but to be supplied as a URL.

Supplied here for use by paper reviewers.

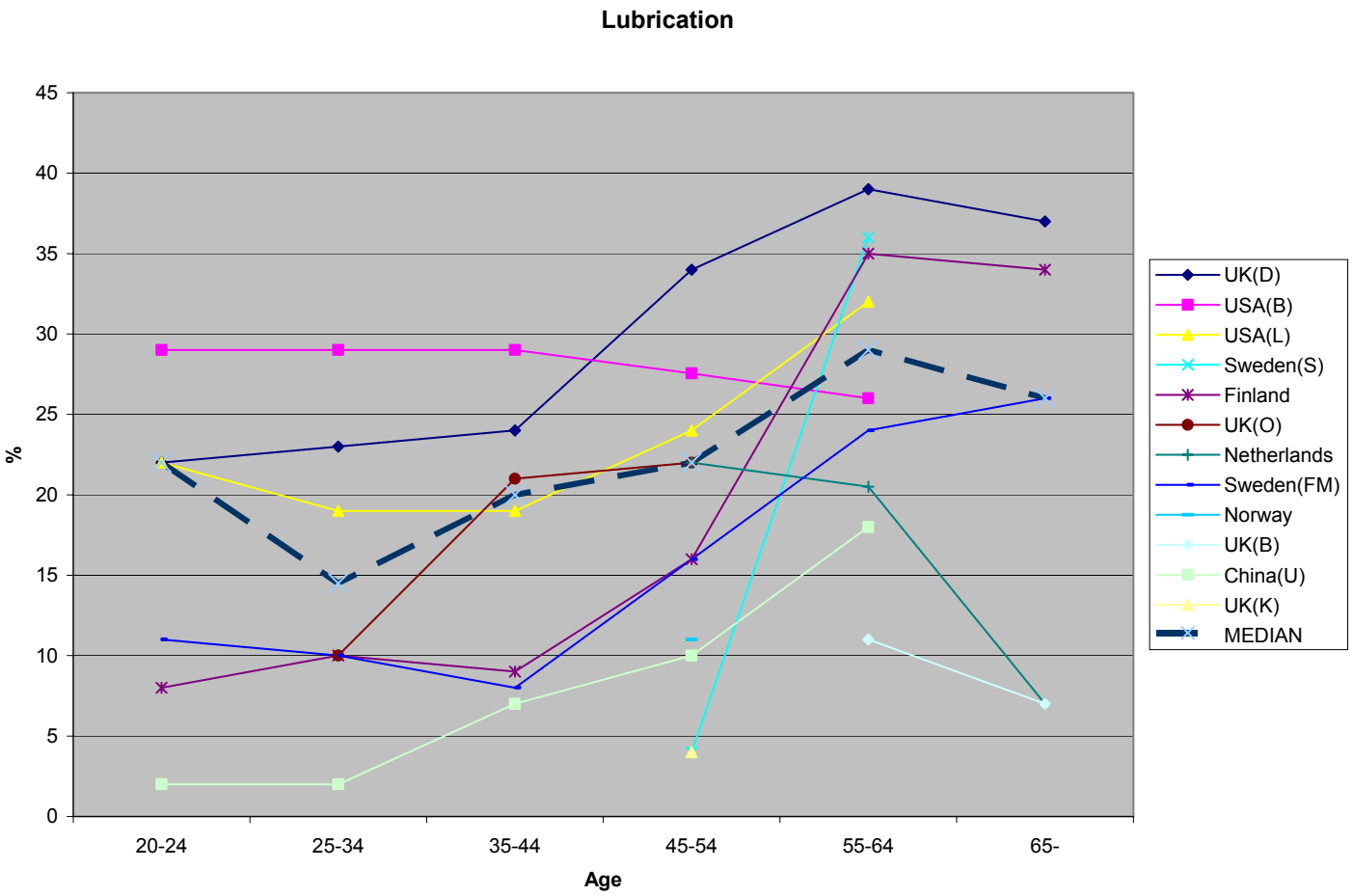
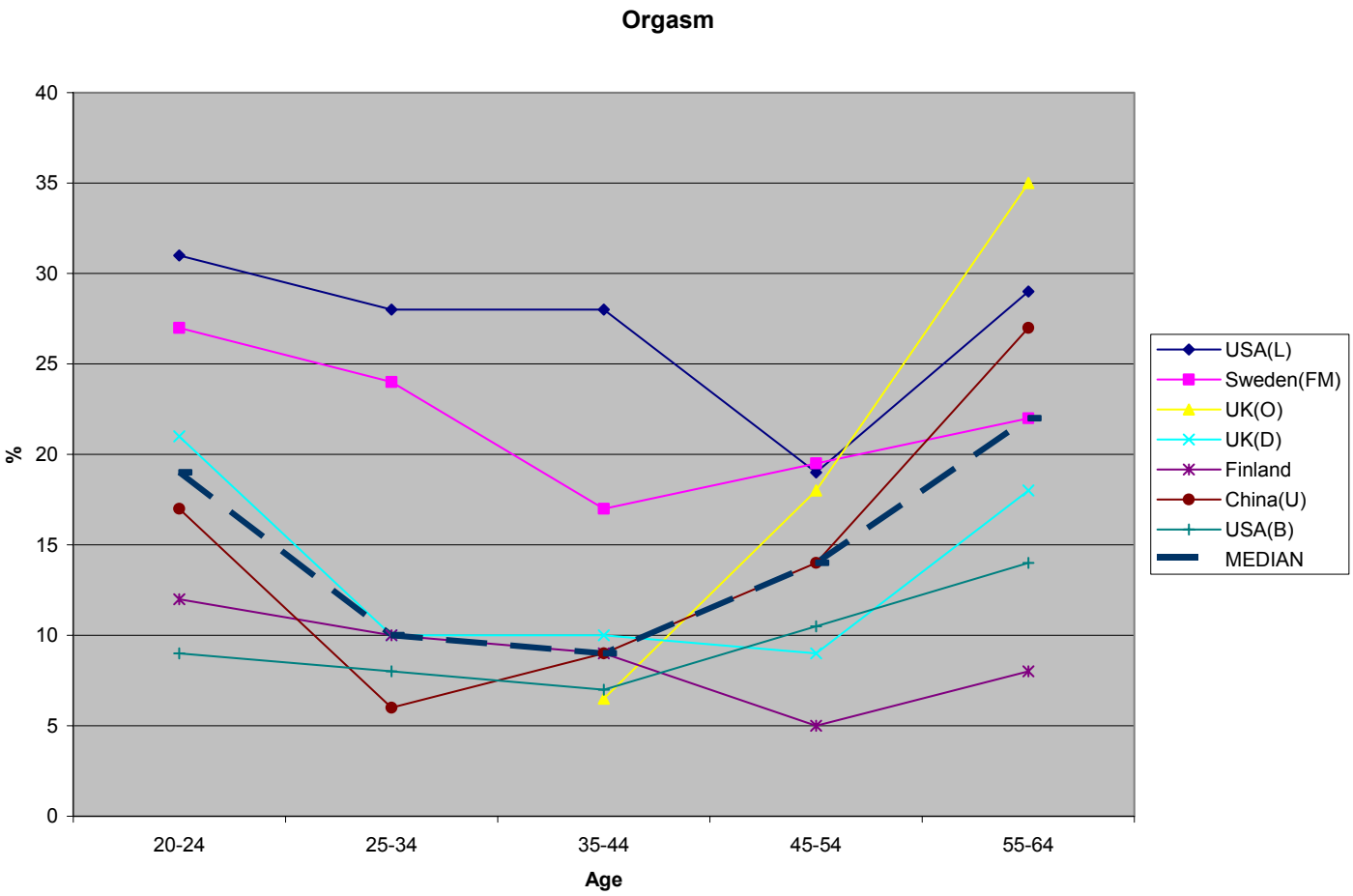


Figure 1. Women's Sexual Issues by Age and Society

Notes: Some values are interpolated to correspond to the age categories used here. The initial in parentheses following a country name indicates author, except for China where (U) indicates urban.

Sources: Dunn, et. al. (2002), Bancroft (2003), raw data from 1992 U.S. study and 2000 China study.



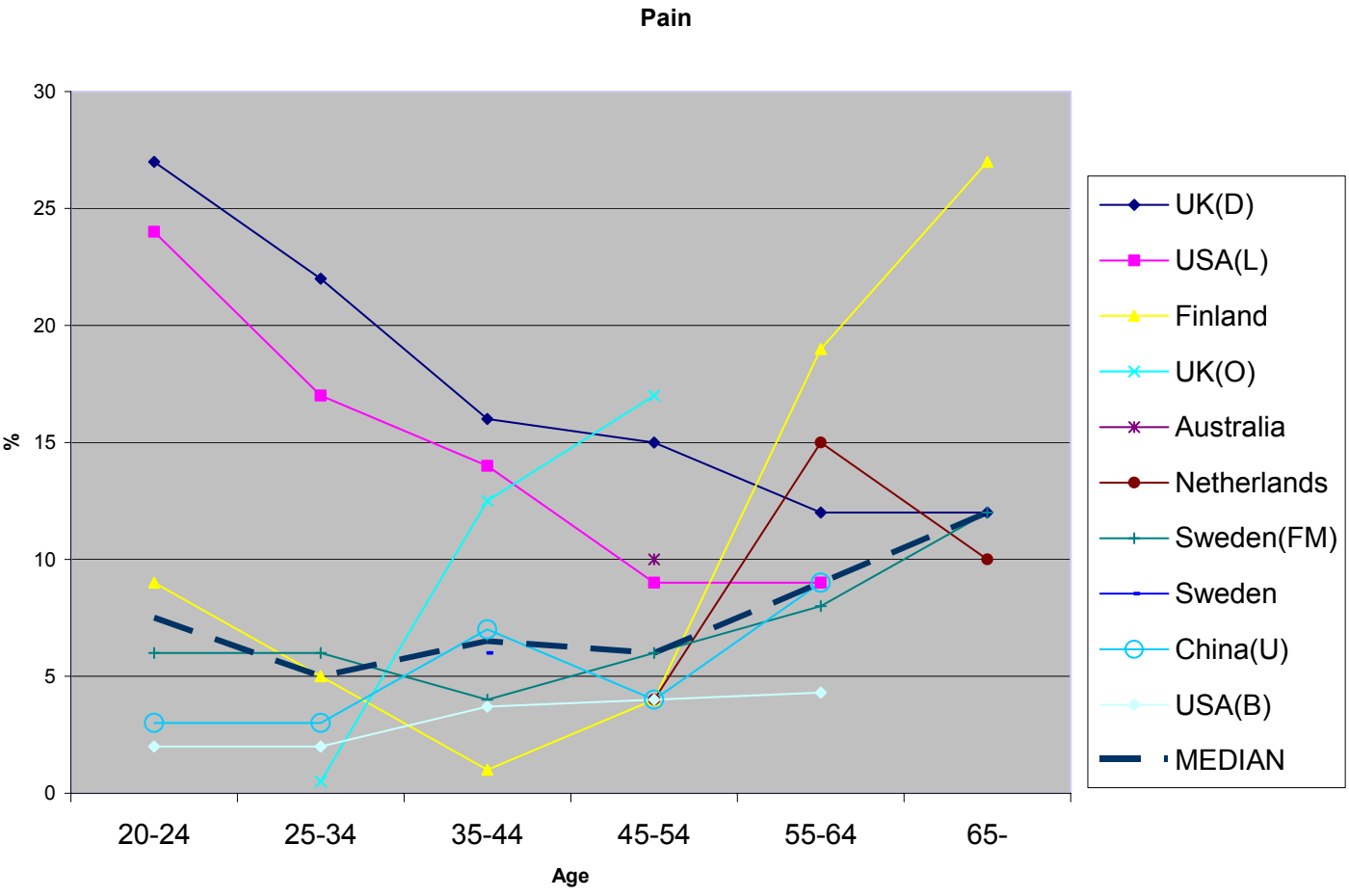
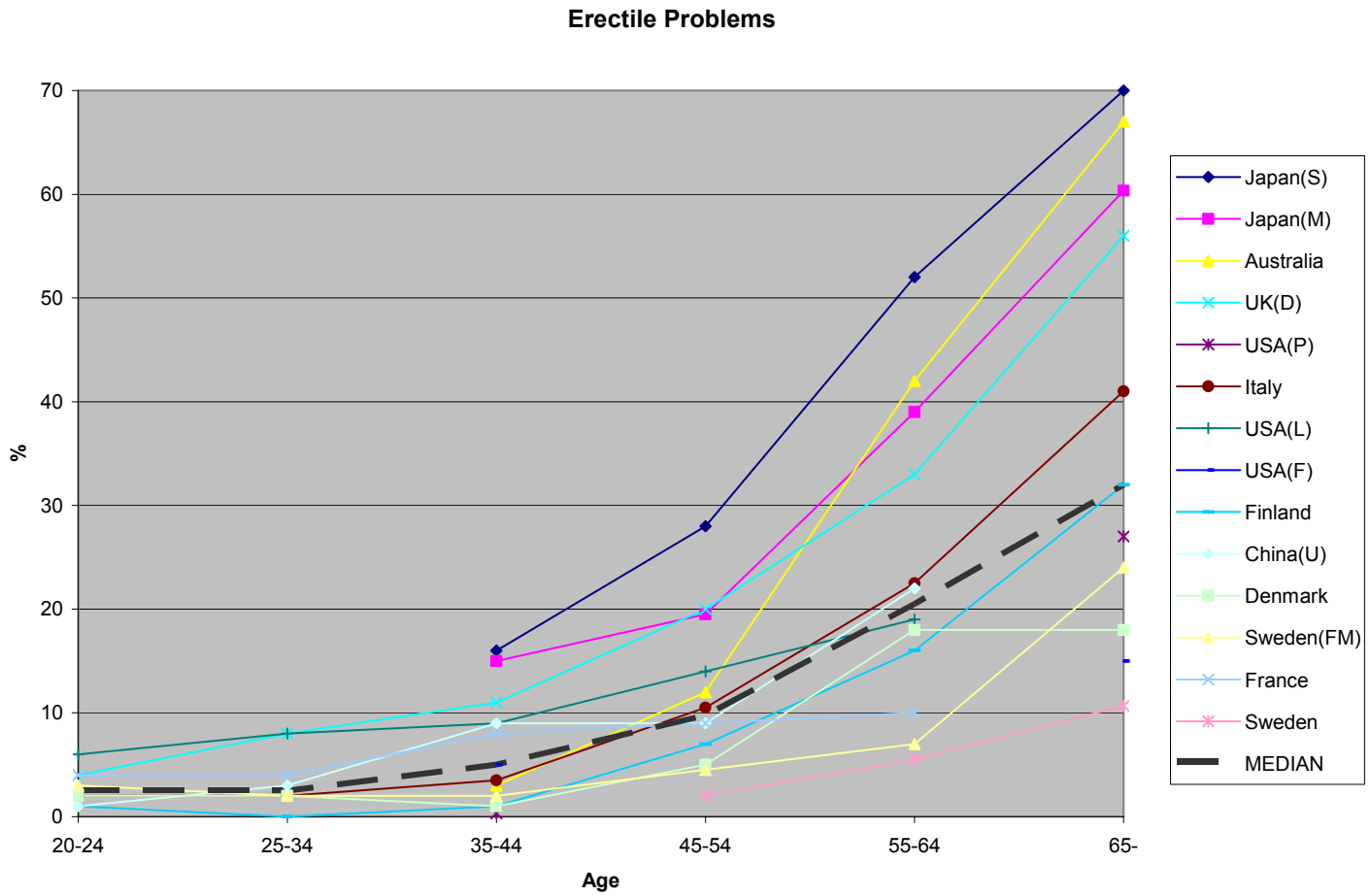


Figure 2. Women's Sexual Issues by Age and Society



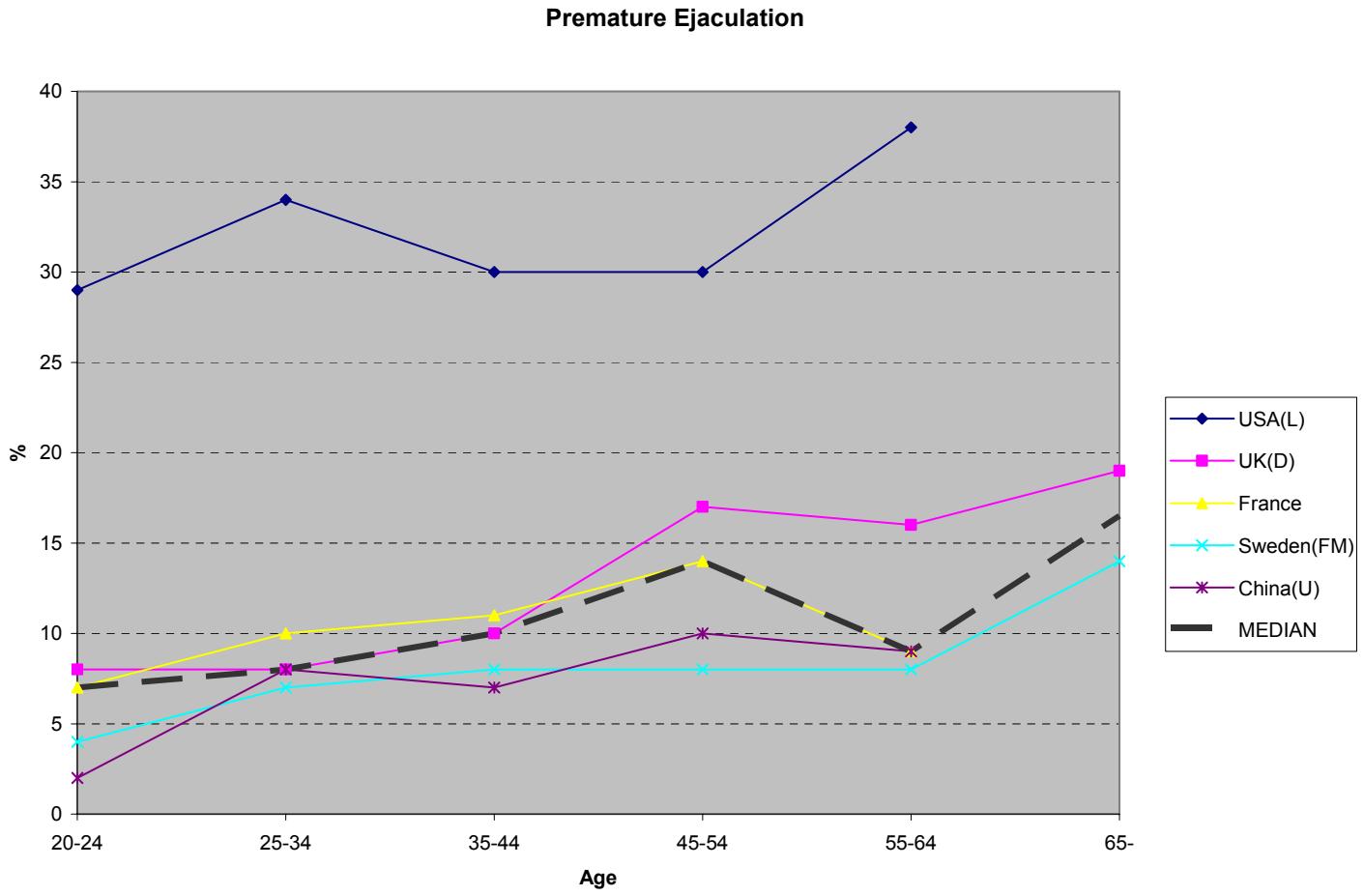


Figure 3. Men's Sexual Problems by Age and Society

Appendix Table 2. Correlates of Sexual Issue Sums (for web page)

(incidence rate ratios)

	Any Duration				Persistent (2+ months)			
	Women		Men		Women		Men	
	IRR	t	IRR	t	IRR	t	IRR	t
Couple's Relation								
daily intimacy absent	1.19 *	(3.52)	1.08	(1.07)	1.67 *	(2.18)	0.84	(-0.92)
any hitting	1.06 *	(2.65)	1.00	(-0.04)	1.15	(0.88)	0.98	(-0.11)
sexual needs unknown	1.07	(0.72)	1.28 *	(2.87)	2.07 *	(2.61)	2.52 *	(4.33)
partner unattractive	0.93	(-0.54)	1.29	(1.32)	1.04	(0.13)	3.08 *	(3.86)
partner had other partner	1.06	(1.23)	1.27	(1.25)	1.41	(0.98)	1.57	(1.11)
Values / Knowledge								
sex is dirty	1.15 *	(2.33)	1.13	(1.48)	1.36	(1.51)	0.59 *	(-2.21)
women stay in place	1.01	(0.08)	1.47 *	(4.70)	0.84	(-1.25)	3.28 *	(3.03)
education	1.41 *	(3.26)	1.16	(0.96)	1.37	(1.05)	0.62	(-1.60)
identifies clitoris	1.04	(1.14)	0.96	(-0.55)	0.78 *	(-2.65)	0.59 +	(-1.94)
liberal sex values	1.20	(1.47)	0.88	(-0.80)	1.02	(0.05)	0.76	(-0.88)
Mental Stress								
mental distress	1.27 *	(2.21)	1.63 *	(3.45)	1.24	(1.10)	2.64 *	(2.35)
fear of pregnancy	1.18 *	(3.83)	1.05	(0.54)	1.04	(0.17)	1.14	(0.49)
harassment possible	1.19 +	(1.70)	1.17	(1.17)	1.54	(1.49)	1.47	(0.93)
Physical Issues / Age								
genito-urinary symptoms	1.05 *	(2.04)	1.28 *	(7.69)	0.99	(-0.05)	1.36	(1.24)
health poor	1.02	(0.42)	1.21	(1.37)	0.95	(-0.28)	2.04	(1.33)
age 20-44	0.94	(-0.53)	1.15 +	(1.70)	2.17 *	(2.09)	1.81 +	(1.93)
age 45-64	1.36 *	(-2.04)	0.94	(-0.50)	1.98 *	(2.36)	2.08 *	(2.56)
Observations	(1138)		(1160)		(1138)		(1160)	

Note: Negative binomial regression results for the sum of five "classic" sexual issues -- lack of interest, pain, dryness (women) /erectile (men) difficulties, lack of arousal, and lack of orgasm. Ratios trimmed from equation when failed to reach .10 level of significance. * p<.05 + p<.10 (for individual ratios). Coefficients and t-statistics adjusted for sample design. Samples of urban residents who had a spouse or other steady sexual partner with whom they had sex last year.

file: odds_summaryE