



First Sexual Intercourse in the Irish Study of Sexual Health and Relationships: Current Functioning in Relation to Age at Time of Experience and Partner Age

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Abstract

The Irish Study of Sexual Health and Relationships, based on a nationally representative sample of Republic of Ireland adults in 2004–2005, was used to examine adult adjustment in individuals who had their first sexual intercourse as a minor with an adult. Participants were classified into one of four groups based on their age at first intercourse and their partner's age: minors under 18 with peers; minors under 16 with adults; minors 16 to 17 with adults; and adults with adults. Adjustment (health, general relationships, satisfaction with most recent sexual partner, self-confidence, education and career achievement, and sexual problems) was compared across groups separately by gender. The vast majority of cases involved postpubertal heterosexual coitus. Overall, minors involved with adults were not significantly less well adjusted than adults involved with other adults on a majority of measures, effect size differences in adjustment were mostly small, and mean adjustment responses consistently indicated good rather than poor adjustment. Sex differences in first-intercourse characteristics and reasons for engaging reliably occurred for all age groups. In general, males compared to females were more willing, wanted more to lose their virginity, felt more ready for it, did it more often on the spur of the moment, and were less often involved in a relationship or in love when it occurred. Sex differences were greatest for boys versus girls under 16 with adults. Mediation and moderator analyses were also performed. Results were discussed in relation to competing perspectives on the effects of minor–adult sex.

Keywords First sexual intercourse · Minor–adult sex · Minor–peer sex · Adolescence · Child sexual abuse · Irish Study of Sexual Health and Relationships

Introduction

The present study examined long-term adjustment in individuals whose first sexual intercourse was as a minor with an adult. The long-term adjustment concerned how individuals functioned as adults in a variety of domains, including health, social, psychological, occupational, and sexual. Its assessment, following the convention in this area of research (e.g., Laumann, Gagnon, Michael, & Michaels, 1994; Rind, Tromovitch, & Bauserman, 1998), was in relative terms: how these individuals compared with appropriate controls. The dominant view among professionals (e.g., clinicians, jurists), politicians, journalists, and the lay public is that minor–adult

sex is often traumatic and harmful, especially if intercourse is involved. It follows from this view that individuals having had minor–adult sexual intercourse would be expected to be sizably more poorly adjusted than controls in multiple domains of behavior (e.g., Hyde & DeLamater, 2017).

The Irish Study of Sexual Health and Relationships (ISSHR), conducted on adults in the Republic of Ireland, was employed to investigate this issue owing to several important advantages it had to offer (Layte et al., 2006). First, it collected data from a nationally representative sample. Second, participants were asked detailed questions about their first sexual intercourse, including their and their partner ages, permitting analysis based on whether the participant was a minor at the time (i.e., less than 18) and the partner was an adult. Third, based on participant–partner ages, it was possible to construct a control group of individuals who had their first sexual intercourse as an adult with another adult, providing an appropriate comparison group in terms of assessing adjustment, given that first intercourse as an adult in much of the West (e.g., including Ireland and

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the U.S.) is considered the ideal. Fourth, the ISSHR contained measures on general health, quality of relationships with others, self-confidence, education and career achievement, sexual problems, and sexual risk, thereby providing multiple domains from which to uncover poorer adjustment, if present.

Definitions

The study of adjustment correlates of child sexual abuse (CSA) dates back at least to the 1940s, but sustained attention to this issue began four decades ago (e.g., Finkelhor, 1979) and since then has dominated research into adverse childhood experiences. Definitions of CSA have varied, but the most common one has been sexual involvement between a minor under age 18 with someone at least 5 years older, usually an adult (Felson, Savorlainen, Fry, Whichard, & Ellonen, 2019). In their meta-analysis of nearly 60 studies on CSA, Rind et al. (1998) noted that the vast majority defined CSA in terms of age difference. In the legal realm, CSA is centrally based on age difference, where the younger partner is anywhere below the local legal age of consent. Legal definitions are based on the assumption that minors below such an age lack knowledge and power relative to their older partner, which makes them vulnerable to intense damage, thereby justifying severe sanctions against this behavior. In short, age discrepancy is virtually the *sine qua non* of CSA definitions.¹

Additionally, central to such definitions has been categorical thinking, in which if a minor is below a given age cutoff, whether by 1 year or 10, and their partner is older, whether by 5 years or 20, then sex between them is seen equally as CSA, with all the associated psychological and legal assumptions (e.g., concerning adjustment effects). For research, the implications are that, to test fundamental assumptions about CSA, it is appropriate to make categorical comparisons (e.g., a CSA group vs. a non-CSA group), even though differences within the CSA group may be large. This approach is widely employed in research on CSA and was followed in the present study as its chief method.

Given the availability of plentiful data, however, as a secondary approach, within-group analyses on participants with minor–adult first sexual intercourse were performed to examine adjustment in relation to continuous age variables (e.g., age at first intercourse, age difference with partner). Additionally, in these analyses, the moderating effect of circumstances (e.g., willing, forced) was investigated.

Research Background

Regarding sexual intercourse between minors and significantly older persons, a consensus among researchers as to its effects does not exist. Finkelhor (1979), based on his study of college students, concluded that beliefs that intercourse is especially traumatic were not borne out by his data and constituted instead a well-entrenched prejudice. Rind et al. (1998), in their meta-analysis of college samples, concurred, finding that sexual intercourse was not associated with more adverse reactions or outcomes. Other researchers, however, have concluded or opined that sexual intercourse involving minors with older persons is among the most harmful forms of CSA (Hyde & DeLamater, 2017). In support, Hyde and DeLamater cited several empirical studies (Fleming, Mullen, Sibthorpe, & Bammer, 1999; Howard & Wang, 2005; Shrier, Pierce, Emans, & DuRant, 1998). These studies, however, restricted CSA to forced or pressured episodes, rendering their findings not generalizable to episodes not forced or pressured.

Two recent studies illustrate this last point. Felson et al. (2019) examined a nationally representative sample of Finnish students mostly aged 12 and 15, defining CSA as any sexual experience, whether unwanted or wanted, under age 18 with someone five or more years older. They found that overt coercion in CSA incidents was uncommon (i.e., 12% for girls; 11% for boys) and that negative appraisals of CSA experiences occurred for only a minority of students: 35% for females and 11% for males. Moreover, negative reactions to sexual intercourse tended to occur less often compared to less intimate forms of sex, suggesting that intercourse is less likely than other forms to be associated with long-term harm because traumatic reaction, as the authors noted, is an important driver of later problems.

In a second study, Rind and Welter (2014) examined reactions to first postpubertal vaginal intercourse using data from the Kinsey sample.² Emotionally negative reactions, which could be reflective of trauma, occurred in a minority of cases

¹ Aside from age discrepancy, CSA definitions have also often included peer sex involving minors if coercion or force was used.

² The Kinsey sample (Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953) has been criticized for not being representative and including selected groups with known biases. Gebhard and Johnson (1979) removed participants from such groups and found the same basic patterns in the “cleansed” versus original samples. Though not representative, the sample was broad and diverse, employing “one hundred percent” sampling for a large minority its participants. In this method, the researchers got all members of a given group (e.g., school class, women’s club) to participate through repeated solicitations, which substantially reduced a variety of potential biases (e.g., volunteer bias). This sample is far more probative in attempting to understand sexual behavior in the general population than clinical samples and is especially valuable for testing universal claims (e.g., pervasive harm) about particular sexual behaviors (e.g., minor–adult sex) (Rind & Welter, 2014).

of adolescent–adult intercourse: 22% for boys and 17% for girls. These rates were similar to those for adults having their first vaginal intercourse with other adults (13% for men, 17% for women), suggesting that adolescent–adult intercourse *per se* was not traumagenic. This study also found that younger adolescents (under age 15) reacted as well or better than older adolescents (aged 15 to 17) to intercourse with adults. For boys under 15, 63% reacted positively (i.e., enjoyed the experience “much”) and 15% reacted emotionally negatively. For boys 15–17, the rates were less favorable: 36% and 24%, respectively. For girls, the corresponding rates were: 17% and 18% for under age 15 and 12% and 17% for ages 15 to 17.

The Felson et al. (2019) and Rind and Welter (2014) studies are important not just because of tapping broad segments of the Finnish and U.S. populations, respectively, but because of the large number of cases analyzed with reaction data on minor–adult sex (in the former, $n = 1175$ girls, $n = 331$ boys; in the latter, $n = 286$ girls, $n = 548$ boys). Two further studies dealing with male first postpubertal same-sex sex add to the general trend just laid out. Rind (2019) examined reactions to this experience in the Kinsey male homosexual sample (general and prison). When the sex involved anal intercourse, adolescent boys with men ($n = 47$ cases) reacted positively at a rate of 74%. None reacted emotionally negatively, in contrast to non-penetrative sexual contacts, where emotionally negative reactions were significantly more frequent (25% of cases). Rind (2018) examined long-term adjustment among males with postpubertal same-sex sexual experiences in the National Health and Social Life Survey (Laumann et al., 1994). In this U.S. nationally representative sample, participants having their first postpubertal same-sex sexual experience as an adolescent boy with a man—experiences that involved penetrative sex (oral or anal) in 95% of cases—did not differ significantly compared to controls in measures of health, happiness, sexual functioning, and educational/career achievement.

Current Study

The current study, based on the ISSHR survey, followed the method of Rind and Welter (2014) in assessing response to minor–adult first sexual intercourse by comparing it to the response of age-equal groups to the same experience. Here, the response compared was long-term adjustment rather than reactions at the time. The minor–adult group was split into two subgroups: minors under age 16 with adults and minors 16 to 17 with adults. In all Anglophone countries, including Ireland, sexual behavior between minors under 16 and adults is defined legally as CSA and treated in the courts and described in the media as especially harmful, which motivated using the break point of 16. Thus, in the analyses, four participant–partner age

groups were constructed and compared, and these comparisons were performed separately by participant gender.

The principal research question was: Is the adult adjustment of individuals who had minor–adult first sexual intercourse statistically significantly and sizably worse than individuals who had their first sexual intercourse as adults with other adults? A secondary research question was: Given that, in minor–adult sex, minors under age 16 are viewed more vulnerable to long-term harm than minors aged 16 to 17 in the law and generally in the mental health field, is the adult adjustment of the former group statistically significantly and sizably worse than that of the latter? A tertiary research question, given the availability of the data, was: Is the adult adjustment of individuals whose first sexual intercourse occurred as a minor with a peer statistically significantly and sizably worse than individuals whose first sexual intercourse occurred as an adult with another adult?

In two of these research questions, the adult–adult group acted as the standard against which to compare the minor–other groups. By definition, the adult–adult group consisted of individuals who had no experience of minor–adult sexual intercourse. The minor–peer group, on the other hand, could have included individuals with minor–adult sexual intercourse, but just not with the first partner (the relationship that was assessed in the current study). Again, first sexual intercourse as an adult with another adult is the ideal in Anglophone societies, considered the healthiest time for this behavior to begin, and so the adult–adult group acted as an appropriate control group for each minor–other group in assessing current adjustment.

The literature review just presented suggests two competing sets of hypotheses or expectations regarding the research questions. Hyde and DeLamater (2017), in their survey of CSA correlates, concluded that in “most cases childhood sexual abuse is psychologically damaging, and may lead to symptoms such as depression and PTSD” (p. 391). They also concluded that sexual intercourse is especially harmful. Their conclusions, that CSA has pervasive and intensely negative effects, especially the more “severe” it is (i.e., the more intimate the contact), are the dominant ones in the psychology and psychiatry fields (e.g., Kendall-Tackett, Williams, & Finkelhor, 1993). On the other hand, Hyde and DeLamater offered a different opinion concerning sibling incest, often considered CSA in the mental health field. Based on a study they reviewed, they concluded that this form of CSA is less damaging or not damaging at all, given that the age discrepancy between partners is often narrow. From this dominant perspective (a.k.a. “CSA paradigm,” Rind, 2018), it would be expected in the current study that both minor–adult groups would show statistically significantly and sizably poorer adjustment than adult–adult controls. Given the importance of age discrepancy in this perspective, it would be expected that minors under age 16 with adults would fare even worse than minors aged 16 to 17 with adults. But because minors with peers are close in age, little difference would be expected in adjustment versus the adult–adult comparison group.

By contrast, expectations from the review just presented of results from various nationally representative samples and the Kinsey sample are that differences in adjustment between the adult–adult group and the minor–adult groups would be small. Additional results from studies using the Kinsey sample (i.e., Rind, 2019; Rind & Welter, 2014), finding that younger minors with adults did not react worse than older minors with adults, suggest an expectation of little difference in adjustment between minors under age 16 with adults versus minors 16 to 17 with adults. These studies, which also compared minor–peer and adult–adult reactions, showing the former not to be inferior to the latter, suggest an expectation of little adjustment differences between these groups in the current study—the same expectation as in the dominant perspective (see above).

Several approaches were used in testing these competing expectations. First was statistical significance. For example, did minors involved with adults do more poorly on adjustment measures? Second was effect size—what was the magnitude of these differences (e.g., small, medium, large)? Third was consideration of the results themselves in terms of means or modal responses. For example, if an adjustment measure ran from poor to excellent, where on the scale was the mean result for a minor–adult group—in the problematic or non-problematic region? The dominant perspective would most clearly be supported when analyses of most adjustment measures were statistically significant with large effect sizes, and in which results in the minor–adult groups fell into the problematic region of the measurement scales. The alternative perspective would be supported with relatively few significant differences, small effect sizes, and results in the non-problematic regions.

Method

Sample

The present study used data from the ISSHR, which employed a nationally representative sample of adults aged 18–64 in the Republic of Ireland (Layte et al., 2006). The survey was conducted in 2004–2005 after being commissioned by the Department of Health and Children and the Crisis Pregnancy Agency at the recommendation of the National AIDS Strategy Committee to examine sexual beliefs, attitudes, and behaviors as they relate to healthy practices concerning issues such as sexually transmitted infections (STI) and pregnancy in Ireland. The sampling frame was drawn from the non-institutional population in private residential housing. The survey was conducted via telephone using random digit dialing to landlines. Computer-aided telephone interviewing (CATI) was employed to guide the questions and the recording of responses. At time of the survey, 88% of the Irish

population in the target age range lived in residences with landlines. The response rate was 59.5% in terms of completed interviews, yielding 7441 total cases ($n = 3188$ men; $n = 4253$ women), which were analyzed in the present study. As Layte et al. (2006) noted, this rate was comparable to other national surveys in Ireland and Great Britain based on face-to-face interviews, although it was lower than other national surveys such as Laumann et al. (1994), with a response rate of 79%.

Measures

The ISSHR questionnaire consisted of 12 sections.³ In the first, the interviewer verified that the household member being spoken to fit the required age range of 18 to 64. If so, after assuring anonymity and confidentiality and getting agreement for participation, the interviewer asked a number of demographic questions. Ensuing sections included questions on: learning about sex; sexual knowledge, attitudes, and beliefs; first sexual experience; sexual attractions; heterosexual partnerships and practices; homosexual partnerships and practices; most recent sexual event; sexual problems; sex engaged in while outside of Ireland; sexually transmitted infections and use of health services; more demographics and other personal characteristics. From these sections, items were selected relevant to the present inquiry, as described next.

Participant–Partner Age Groups

Participants were asked whether they had experienced vaginal or anal intercourse, and if so, at what age. If they were male and had anal intercourse, they were asked whether their partner was male or female. Participants were also asked what their partner's age was. In the case of having both vaginal and anal intercourse, participant and partner ages in the current analysis were based on the earlier of these two types of intercourse. Based on these responses, participant–partner age groups were constructed as follows: (1) *minor–peer*, if participant was under 18 and partner was within 4 years of age; (2) *minor (< 16)–adult*, if participant was under 16 and partner was 5 or more years older; (3) *minor (16–17)–adult*, if participant was aged 16–17 and partner was 5 or more years older; and (4) *adult–adult*, if participant was at least 18 years old and so was partner, or if partner was less than 18, then no more than 4 years younger than the participant.

³ Questionnaire at: <http://www.ucd.ie/issda/static/documentation/esri/issshr-questionnaire.pdf>. Accessed January 27, 2019.

Health

Participants were asked, “How is your health in general,” with response options: 1 = excellent; 2 = very good; 3 = good; 4 = fair; 5 = poor (Sect. L, question 7). In the present study, these values were reversed such that low values indicated poorer health and high ones better health.

Relationship Problems

Two items were found and used that assessed participants’ problems in general relationships. One was: “Maintaining close relationships has been difficult and frustrating for me” (Sect. L, question 8d). The other was: “I have not experienced many warm and trusting relationships with others” (Sect. L, question 8f). For each item, response options were: 1 = strongly disagree; 2 = disagree somewhat; 3 = disagree slightly; 4 = agree slightly; 5 = agree somewhat; 6 = strongly agree.

For present purposes, the two items were combined to form a relationship–problems construct ($\alpha = .57$) for use in analyses, in which higher values indicated more problems.⁴

Satisfaction with Most Recent Sexual Partner

Two items were found and used concerning participants’ emotional and physical satisfaction with their most recent sexual partner. The first was: “In general, how emotionally satisfying do you find your relationship with this partner,” with response options: 1 = extremely satisfying; 2 = very satisfying; 3 = moderately satisfying; 4 = slightly satisfying; 5 = not satisfying at all (Sect. H, question 15). The second was: “In general, how physically pleasurable do you find the sex with this partner,” with response options: 1 = extremely pleasurable; 2 = very pleasurable; 3 = moderately pleasurable; 4 = slightly pleasurable; 5 = not at all pleasurable (Sect. H, question 14).

For present purposes, response values were reversed such that higher values indicated greater emotional or physical satisfaction. These two items were combined to form a partner satisfaction construct ($\alpha = .74$) for use in the analyses.

Self-Confidence

In the section on personal characteristics (Sect. L), participants were asked three questions relevant to their self-confidence: “I tend to be influenced by people with strong opinions” (question 8a); “I have confidence in my opinions even if they are contrary to the general consensus” (question 8b); and “I judge myself by what I think is important, not by the values of what others think is important” (question 8c). For each item, response options were: 1 = strongly disagree; 2 = disagree somewhat; 3 = disagree slightly; 4 = agree slightly; 5 = agree somewhat; 6 = strongly agree.

For present purposes, the first item was reverse-scored and then combined with the other two items to form a self-confidence construct ($\alpha = .52$), which was then used in the analyses. For this construct, higher values indicated greater self-confidence.

Educational Achievement

In the section on personal characteristics (Sect. L), participants were asked, “Which of the following best describes the highest level of education you have completed” (question 1), with response options: 1 = Primary; 2 = Group, Junior Certificate or equivalent; 3 = Leaving Certificate or equivalent; 4 = Post-Leaving Cert Diploma/Certificate; 5 = Third level (university, I.T’s) or equivalent. Higher values indicated greater academic achievement.

Job/Career Achievement

Based on the question, “What is your present or last occupation,” participants were classified into one of seven social-class categories based on occupation. Classification was based on the “1986 class schema,” a social-class measure used by the Irish Central Statistics Office beginning in 1986 (Layte et al., 2006). This measure, in turn, was based on efforts over the previous decades by researchers and the government to efficiently classify individuals in terms of social class, as O’Hare, Whelan, and Commons (1991) described in detail. The categories were: 1 = higher professional and higher managerial; proprietors and farmers owning 200 or more acres; 2 = lower professional and lower managerial; proprietors and farmers owning 100–199 acres; 3 = other non-manual and farmers owning 50–99 acres; 4 = skilled manual and farmers owning 30–49 acres; 5 = semi-skilled manual and farmers owning less than 30 acres; 6 = unskilled manual; 7 = non-gainful occupation (in data file, variable L6sc).

For present purposes, scoring was reversed such that higher values indicated greater job/career prestige and achievement.

⁴ In a recent review of alpha (i.e., Cronbach’s alpha), as used in research, Taber (2018) noted that, though an $\alpha = .70$ is widely considered a floor for acceptable internal consistency for combined measures, actual research shows that there is limited grounds for adopting this heuristic. Taber documented that lower alphas (e.g., $\geq .40$) in certain areas of research have proven to be useful. Moreover, alpha is affected by number of items (it is lower the fewer the items). In the present study, alphas ranged from .52 to .82 based on few items per construct, which is considered here acceptable in light of Taber’s review.

Sexual Problems

In a later section on sexual problems (Sect. I), participants were asked whether, in the last 5 years, there was a period of one month or more when they experienced the following concerns: “lacked interest in having sex” (question 2a); “did not find sex pleasurable” (question 2b); “were unable to come to orgasm (a climax)” (question 2c); “(Men only) came to orgasm (a climax) too quickly” (question 2d); “(Men only) had trouble maintaining an erection” (question 2e); “(Women only) experienced physical pain during intercourse” (question 2f); “(Women only) had trouble becoming lubricated or wet” (question 2g); “felt anxious about your ability to perform sexually” (question 2h). For these items, response options were: 1 = yes; 2 = no.

For present purposes, a “no” response was recoded as “0,” and then responses to all 6 items for each gender were added to form a sexual problems score, ranging from 0 (none) to 6 (maximal). The internal consistencies for males and females, respectively, were alphas = .78 and .82. These scores were then used in the present analyses.

Sexual Risk

In a section on sexually transmitted infections (STI) and use of healthcare services (Sect. K), participants were asked, “Have you ever been told by a health professional that you have a sexually transmissible disease or illness (STI or STD or VD)” (question 7), with response options: 1 = yes; 2 = no. This item is relevant to assessing sexual risk (Rind, 2018). In the present study, “no” was recoded as “0,” such that 0 indicated no STI and 1 indicated an STI.

Sexual Activity

To assess sexual activity, two dimensions were identified in the questionnaire and employed: frequency and number of partners. Regarding the former, an item asked, “How often in total have you had sex in the last 4 weeks” (Sect. H, question 17), with response options: 1 = “0”; 2 = “1–3”; 3 = “4–8”; 4 = “9–15”; 5 = “16–24”; 6 = “25 or more.” Regarding the latter, an item asked, “Altogether in your life so far, with how many (women/men) have you had sex—that is vaginal, oral or anal sex” (Sect. F, question 6), with response the actual number estimate. In the analyses, these items were analyzed separately, as they represent different and important dimensions of sexual activity.

Characteristics of First Intercourse

In the section on first sexual experience (Sect. D), participants were asked a number of questions on the characteristics of their first sexual intercourse.

Level of consent Two questions dealt with consent. The first asked, “Would you say that you were both equally willing to have intercourse that first time, or was one of you more willing than the other” (question 5a), with response options: 1 = we were both equally willing; 2 = I was more willing; 3 = my partner was more willing. If participants answered that their partner was more willing, then this follow-up question was asked, “Would you say that you were also willing, you had to be persuaded or you were forced” (question 5b), with response options: 1 = you were also willing; 2 = you had to be persuaded; 3 = you were forced.

For present purposes, these two items were combined into two consent variables. One was “willing,” with values: 0 = had to be persuaded or was forced; 1 = willing. A second was “forced,” with values: 0 = willing or had to be persuaded; 1 = forced.

Type of relationship A question asked, “Which of the following best describes the relationship between you and the other person at the time you first had vaginal [anal] sexual intercourse” (question 4), with response options: 1 = just met for the first time/didn’t know each other; 2 = knew each other, but didn’t have a steady relationship at the time; 3 = had a steady relationship at the time; 4 = were living together (but not married or engaged); 5 = engaged to be married; 6 = married; 7 = you paid for sex.

For present purposes, a “relationship” variable was created with values: 0 = not in a relationship (i.e., response options 1, 2, or 7 in the question above); 1 = in a relationship (i.e., response options 3 through 6 in the question above).

Planning of first intercourse An item inquired, “Before you had intercourse that first time, had you expected it to happen on that occasion, or did it just happen on the spur of the moment” (question 9), with response options: 1 = you had expected it to happen soon or at that time; 2 = it just happened on the spur of the moment. For present purposes, the latter response option was recoded as “0,” such that 0 indicated unexpected, while 1 indicated expected.

Timing of first intercourse An item asked, “Looking back now to that first time you had sexual intercourse, do you think...” (question 10), with response options: 1 = you should have waited longer before having sex with anyone; 2 = you should not have waited so long; 3 = it was about the right time. For present purposes, this item was recoded as “timing,” with values: 0 = too soon (i.e., a response of “1” to the question above); 1 = not too soon (i.e., responses of “2” or “3” to the question above).

Reasons for first intercourse Participants were asked, “Please could you tell me which of the following statements applied to that first experience of sexual intercourse by answering ‘yes’ or ‘no’ after each statement” (question 11). The reasons were: (a) You were curious about what it would be like; (b) You were carried away by your feelings; (c) Most people in your age group seemed to be doing it; (d) It seemed

like a natural ‘follow on’ in the relationship; (e) You or your partner had been drinking at the time or taking drugs at the time; (f) You wanted to lose your virginity; (g) You were in love; (h) To please your partner; (i) You felt ready, that it was the right time/right person.

Procedure

The ISSHR data are owned by the Crisis Pregnancy Agency, which permits free usage of the data for non-commercial research. Obtaining the data in SPSS format required completing an “ISSDA Data Request Form for Research Purposes,” which was available at the Irish Social Science Data Archive (ISSDA) website.⁵ After filling out this form and receiving the data, we coordinated the variables with the questions in the ISSHR questionnaire, recoded variables as needed, and then ran the appropriate analyses in SPSS.

Statistical Analyses

Comparison of means was made using analysis of variance (ANOVA) followed by Hochberg post hoc tests when appropriate. This type of post hoc test is recommended when sample sizes differ substantially between conditions (Field, 2013). Comparison of proportions was made using chi-square analysis, in which p values were based on exact tests (two-sided) via SPSS. This approach is accurate for all estimates of p values, including when expected cell frequencies fall below 5 (Metha & Patel, 2011). Post hoc pairwise contrasts on proportions were performed via Bonferroni-adjusted z -tests. Correlational and independent t -tests were two-tailed.

Because of low base rates in the minor–adult groups compared to other groups, Cohen’s d was used as a measure of effect size in contrasting means, and the odds ratio (OR) was employed when contrasting proportions. Contrasts were between the results for the adult–adult group and each minor–other group. Small, medium, and large d s were taken to be .20, .50, and .80, following Cohen’s (1988) guidelines. These values represent the magnitude of difference between group means in standardized units. An OR in the current study represents, for example, the odds of having some problem in a minor–adult group compared to (i.e., divided by) the odds of having the problem in the adult–adult group. An OR > 1 would then indicate higher rates of problems in the minor–adult group. In some analyses, converting OR to Cohen’s d was useful in order to compare effect sizes across measures. For this conversion, the formulas provided by Salgado (2018) were used. From these formulas, small, medium, and large d s corresponded to ORs of 1.44, 2.47, and 4.26,

respectively. Finally, in analyses restricted to comparing gender differences within each participant–partner age group, where low base rates did not obtain (and a 50–50 split could be assumed), the phi coefficient (i.e., equivalent to r) was used as the measure of effect size, where r s = .10, .24, and .37 corresponded to small, medium, and large effects, according to Cohen’s (1988) guidelines.⁶

For all tests, p values $\leq .05$ were considered statistically significant (referred to henceforth as “significant”). Given the large number of tests performed in certain analyses, experiment-wise error concerns could motivate correcting downwards the significance levels. But given that higher significance levels favored the dominant perspective, they were used here as a conservative approach, given that the present study was designed to interrogate the dominant perspective.

In analyzing differences between groups (i.e., means and proportions), statistical tests employed unweighted analyses. Given some imbalances in the sample, such as more female than male participants, the ISSHR team developed weights for each case for rebalancing in order to achieve best estimates in the Irish population. In other analyses (i.e., effect sizes, regressions), weighted analyses were used for more precise population-based estimates.

In order to assess current adjustment among participants in the minor–other groups, the basic approach was to compare their responses to those in the adult–adult group. Supplemental analyses focusing on specific subsets of the cases were performed, analyzing further what might explain variations in adjustment. Here, both mediation and moderation analyses were employed where appropriate, following recommended techniques for determining whether an independent variable’s (X) relationship with a dependent variable (Y) was due to a mediator (M) (i.e., X led to M , which, in turn, led to Y) or a moderator (W) (i.e., the relationship between X and Y varied in relation to varying levels of W , as indicated by the interaction between X and W) (Baron & Kenny, 1986; Hayes, 2018).⁷

⁶ Cohen (1988) suggested that small, medium, and large effect sizes for the product–moment correlation should be r s = .10, .30, and .50, respectively (pp. 79–80). He later suggested the same values for the phi coefficient (i.e., for two dichotomous variables in a 2×2 contingency table) (p. 227). But he also showed the direct mathematical equivalents between Cohen’s d and the correlation r in terms of small, medium, and large (p. 82), with r s = .10, .24, and .37, respectively. Given the present paper’s reliance mostly on Cohen’s d , the latter set of r s was adopted for consistency.

⁷ Additional sources for these analyses included the PROCESS procedure (<http://www.afhayes.com>), which facilitated interpretation of interactions in moderation via graphical visualization, as well as additional web sites providing clear steps for testing mediation, including computing the Sobel test for it, and testing moderation using SPSS: http://orsp.kean.edu/documents/Moderation_Meditation.pdf, and <http://quantpsy.org/sobel/sobel.htm>, retrieved October 22, 2019.

⁵ <http://www.ucd.ie/issda/data/irishstudyofsexualhealthandrelationshipsisshr/>, retrieved January 27, 2019.

Table 1 Mean characteristics in four participant–partner age groups related to first sexual intercourse (vaginal or anal), in Layte et al.'s (2006) ISSHR

	Minor/peer	Minor < 16/adult	Minor 16–17/adult	Adult/adult	
Males/ <i>ns</i>	1058	29	50	1754	$F(3, 2887)$
Age at interview					
<i>M</i>	32.44 _a	36.41 _{ab}	35.78 _a	41.17 _b	103.76**
<i>SD</i>	12.35	13.74	12.64	12.98	
Range	18–64	19–64	18–64	18–64	
Year, first intercourse					
<i>M</i>	1988.6 _a	1982.5 _{ab}	1985.7 _{ab}	1984.6 _b	23.75**
<i>SD</i>	12.5	13.6	12.6	12.1	
Range	1954–2004	1955–2001	1957–2004	1959–2005	
Age, first intercourse					
<i>M</i>	16.02 _a	13.93 _b	16.52 _a	20.80 _c	715.70**
<i>SD</i>	1.16	1.79	.50	3.39	
Range	9–17	6–15	16–17	18–50	
Partner age					
<i>M</i>	16.52 _a	24.24 _b	25.84 _b	20.85 _c	496.25**
<i>SD</i>	1.32	6.71	5.77	3.76	
Range	10–21	17–44	21–50	15–53	
Age difference					
<i>M</i>	0.51 _a	10.31 _b	9.32 _b	0.05 _c	500.41**
<i>SD</i>	1.08	7.84	5.65	2.27	
Range	–2 to 4	5–37	5–33	–4 to 23	
Females/ <i>ns</i>	834	24	111	2957	$F(3, 3922)$
Age at interview					
<i>M</i>	29.26 _a	39.79 _b	31.83 _a	40.96 _b	221.10**
<i>SD</i>	10.00	12.05	10.81	12.40	
Range	18–64	23–59	19–64	18–64	
Year, first intercourse					
<i>M</i>	1992.1 _a	1979.0 _b	1989.8 _a	1985.2 _c	88.86**
<i>SD</i>	10.0	13.2	10.8	11.4	
Range	1958–2004	1955–1997	1958–2003	1959–2005	
Age, first intercourse					
<i>M</i>	16.32 _a	13.75 _b	16.62 _a	21.19 _c	707.76**
<i>SD</i>	.89	2.67	.49	3.28	
Range	11–17	6–15	16–17	18–50	
Partner age					
<i>M</i>	17.74 _a	23.88 _b	24.46 _b	23.51 _b	461.72**
<i>SD</i>	1.53	3.95	3.28	4.49	
Range	12–21	18–35	21–36	16–56	
Age difference					
<i>M</i>	1.41 _a	10.13 _b	7.84 _c	2.32 _d	221.00**
<i>SD</i>	1.28	4.93	3.37	3.16	
Range	–2 to 4	5–22	5–20	–4 to 26	

In Hochberg post hoc tests, means without common subscripts are significantly different

* $p < .05$; ** $p < .01$

Results

Characteristics of Participant–Partner Age Groups

Table 1 shows key attributes of the four participant–partner age groups separately by participant gender. For male participants, mean year of first intercourse was in the 1980s in all groups. Mean participant age at first intercourse was close to mean partner age in both the minor–peer ($M_s = 16.02$ vs. 16.52 , respectively) and adult–adult ($M_s = 20.80$ vs. 20.85 , respectively) groups. Boys under 16 with adults were 10 years younger than partners on average ($M_s = 13.93$ vs. 24.24 , respectively), while boys 16 to 17 with adults were 9 years younger on average ($M_s = 16.52$ vs. 25.84 , respectively).

For female participants, mean year of first intercourse ran from $M = 1979$ (girls under 16 with men) to $M = 1992$ (minor–peer). In the age-equal groups, participants were younger than their first-intercourse partners by a year on average in minors with peers ($M_s = 16.32$ vs. 17.74 , respectively) and by 2 years in adults with adults ($M_s = 21.19$ vs. 23.51 , respectively). Girls under 16 with men were 10 years younger than their partners on average ($M_s = 13.75$ vs. 23.88 , respectively), while girls 16 to 17 with men were 8 years younger on average ($M_s = 16.62$ vs. 24.46 , respectively).

First intercourse was mostly a postpubertal event (not shown in the table). In the vast majority of cases of minors under 16 with adults, participants were aged 13 to 15 (86.2% for boys; 87.5% for girls). In almost all cases of minors with peers, participants were aged at least 13 (98.7% for boys; 99.6% for girls). In terms of same-sex (i.e., anal) versus opposite-sex first intercourse for males, almost all cases involved opposite-sex partners (99.6%) across the four participant–partner age groups. For boys under 16 with adults, 89.7% of partners were women; for boys 16 to 17 with adults, the rate was 93.7%. In short, first intercourse was mostly postpubertal and heterosexual.

Adjustment and Sexual Activity

Adult adjustment (health, general relationships, self-confidence, education, career, and sexual problems), as well as level of sexual activity, is shown in Table 2 (males) and Table 3 (females). Table 4 shows results for sexual risk (i.e., STI) for both genders. Table 5 then shows effect sizes, indicating the magnitude of difference in means or proportions between the adult–adult group and each minor–other group from Tables 2, 3, and 4.

Males

Health The groups did not differ on the health measure, with mean current health falling between “good” and “very good”

(Table 2). Effects sizes were small in adult–adult versus both minor–adult groups (Table 5).

Relationship problems Mean relationship problems differed significantly among the groups. In post hoc analysis, boys under 16 with adults indicated having more problems ($M = 2.76$) than men with other adults ($M = 2.10$) (Table 2). Both means, however, indicated average disagreement (i.e., between slightly to somewhat disagree) with having such problems. The effect size between these two groups was medium; it was small between men with adults versus boys 16–17 with adults (Table 5).

Satisfaction with most recent sexual partner Mean emotional and physical satisfaction with most recent sexual partner did not differ among groups, with means indicating “very satisfying” in all groups (Table 2). Effect sizes were small between the adult–adult and minor–other groups (Table 5).

Self-confidence Self-confidence did not differ significantly between groups (Table 2), with all groups displaying high levels of self-confidence. Effect sizes were near-zero for the adult–adult versus minor–adult groups (Table 5).

Educational achievement Level of education differed among groups, with the adult–adult group exceeding significantly the minor–peer group in post hoc analysis (Table 2). Mean educational attainment was somewhat above the scale midpoint in all groups, with small effect sizes in the adult–adult versus minor–other comparisons (Table 5).

Job/career achievement Career achievement differed significantly among groups, with the adult–adult group exceeding each of the minor–other groups, which were not different from one another; mean achievement for the minor–other groups fell above the midpoint, between skilled manual labor and non-manual labor (Table 2). Effect sizes were small in the adult–adult versus minor–other comparisons (Table 5).

Sexual problems Mean number of sexual problems differed significantly, with both minor–adult groups having more problems than the adult–adult group (Table 2). Whereas men with other adults had slightly more than one problem out of 6 on average, boys under 16 with adults had nearly twice as many, with medium effect size (Table 5).

Sexual risk (STI) Rates of STI differed significantly among groups, in which men with other adults had the lowest (Table 4). Boys under 16 with adults had a substantially higher rate (17%) than boys with peers (4.5%) and men with adults (2.5%). Effect sizes as odds ratios (OR) were computed contrasting each minor–other group with men involved with other adults. The effect sizes were large for each minor–adult group: boys under 16 with adults ($OR = 8.06$, equivalent to $d = 1.15$); boys 16–17 with adults ($OR = 5.27$, equivalent to $d = .92$) (Table 5).

Frequency of sexual activity: last 4 weeks Both boys under 16 with adults and boys with peers had greater frequency of recent sex than adults with adults (Table 2). The effect size

Table 2 Male sample in ISSHR

		Minor/peer	Minor < 16/adult	Minor 16–17/adult	Adult/adult	$F(3,-)^a$
Health in general <i>1 = poor; 5 = excellent</i>	<i>M</i>	3.75 _a	3.43 _a	3.53 _a	3.75 _a	1.79
	<i>SD</i>	.97	1.07	.94	.96	
	<i>n</i>	1046	28	49	1743	
Relationships in general: Having problems <i>1 = strongly disagree; 6 = strongly agree</i>	<i>M</i>	2.20 _{ab}	2.76 _a	2.36 _{ab}	2.10 _b	3.72*
	<i>SD</i>	1.36	1.67	1.40	1.30	
	<i>n</i>	1030	29	49	1717	
Most recent sex partner: How satisfying emotionally, physically <i>1 = not at all; 5 = extremely</i>	<i>M</i>	4.12	3.97	3.85	4.13	2.39
	<i>SD</i>	.81	1.06	.96	.76	
	<i>n</i>	1038	29	50	1709	
Self-confidence <i>1 = low; 6 = high</i>	<i>M</i>	5.21	5.24	5.21	5.27	.82
	<i>SD</i>	.86	.83	.97	.84	
	<i>n</i>	1031	29	49	1719	
Highest level of education completed <i>1 = primary; 5 = third level (university)</i>	<i>M</i>	3.45 _a	3.17 _{ab}	3.46 _{ab}	3.59 _b	3.23*
	<i>SD</i>	1.30	1.28	1.46	1.37	
	<i>n</i>	1058	29	50	1754	
Job/career achievement <i>1 = non-gainful; 7 = high prof./manag.</i>	<i>M</i>	4.46 _a	4.76 _a	4.43 _a	5.01 _b	22.04**
	<i>SD</i>	1.77	1.55	1.81	1.71	
	<i>n</i>	1010	29	47	1722	
Sexual problems <i>0 = none; 6 = six different types</i>	<i>M</i>	1.28 _{ab}	2.31 _c	1.86 _{bc}	1.20 _a	6.92**
	<i>SD</i>	1.59	2.00	1.93	1.65	
	<i>n</i>	1042	29	49	1665	
Sexual activity: frequency last 4 weeks <i>1 = 0; 6 = 25 or more</i>	<i>M</i>	2.91 _a	3.28 _a	2.70 _{ab}	2.71 _b	9.70**
	<i>SD</i>	1.01	.98	1.07	.87	
	<i>n</i>	799	25	40	1254	
Lifetime number of intercourse partners <i>Actual number</i>	<i>M</i>	13.81 _a	40.10 _b	17.84 _a	6.27 _c	40.78**
	<i>SD</i>	26.17	109.61	24.99	17.35	
	<i>n</i>	1058	29	50	1754	

Mean adjustment and sexual activity as a function participant–partner age group

In Hochberg post hoc tests, means without a common subscript are significantly different

^aIn $F(3,-)$, the “-” is the df_w ; for each ANOVA, it is sum of the ns minus 4 in the measure

* $p < .05$; ** $p < .01$

was medium for boys under 16 with adults versus men with other adults (Table 5).

Lifetime sexual partners Boys under 16 with adults had more lifetime partners involving sexual intercourse than those in the other three groups (Table 2). Contrasting men with other adults versus both boys-with-adults groups yielded medium effect sizes (Table 5).

Females

Health As with males, no significant differences for females occurred, with mean current health falling between “good” and “very good” in all groups (Table 3). Compared to women with men, the effect size was medium for girls under 16 with men and small for girls 16–17 with men (Table 5).

Relationship problems Mean relationship problems differed significantly among the groups, with the minor–peer group ($M = 2.05$), indicating more problems than the adult–adult group ($M = 1.83$) in post hoc analysis (Table 3). Regardless of group, participants disagreed, on average, to having such problems. Effect sizes were small (Table 5).

Satisfaction with most recent sexual partner As with males, mean emotional and physical satisfaction with most recent sexual partner did not differ among female age groups, with mean response being “very satisfying” for all groups (Table 3). Effect sizes were small (Table 5).

Self-confidence Unlike males, self-confidence did differ among groups. Here, the adult–adult was slightly higher than the minor–peer group (Table 3). Across groups, mean self-confidence was high. Effect sizes contrasting the adult–adult and minor–adult groups were small (Table 5).

Table 3 Female sample in ISSHR

		Minor/peer	Minor < 16/adult	Minor 16–17/ adult	Adult/adult	$F(3,-)^a$
Health in general	<i>M</i>	3.73 _a	3.25 _a	3.59 _a	3.69 _a	2.43
<i>1 = poor; 5 = excellent</i>	<i>SD</i>	.98	1.03	1.02	.97	
	<i>n</i>	827	24	110	2944	
Relationships in general: having problems	<i>M</i>	2.05 _a	2.06 _{ab}	2.14 _{ab}	1.83 _b	8.60**
<i>1 = strongly disagree; 6 = strongly agree</i>	<i>SD</i>	1.32	1.17	1.31	1.16	
	<i>n</i>	819	24	107	2901	
Most recent sex partner: How satisfying emotionally, physically	<i>M</i>	4.14	4.00	4.11	4.08	1.27
<i>1 = not at all; 5 = extremely</i>	<i>SD</i>	.82	.93	.79	.76	
	<i>n</i>	828	23	110	2881	
Self-confidence	<i>M</i>	5.04 _a	5.32 _{ab}	5.00 _{ab}	5.20 _b	8.42**
<i>1 = low; 6 = high</i>	<i>SD</i>	.98	1.12	1.05	.90	
	<i>n</i>	819	24	107	2902	
Highest level of education completed	<i>M</i>	3.56	3.08	3.55	3.56	1.06
<i>1 = primary; 5 = third level (university)</i>	<i>SD</i>	1.25	1.41	1.37	1.32	
	<i>n</i>	834	24	111	2957	
Job/career achievement	<i>M</i>	4.15 _a	4.04 _{ab}	4.72 _b	4.57 _b	11.59**
<i>1 = non-gainful; 7 = high prof./manag.</i>	<i>SD</i>	1.88	1.92	1.92	1.81	
	<i>n</i>	781	23	106	2825	
Sexual problems	<i>M</i>	1.99	1.91	2.26	1.89	1.63
<i>0 = none; 6 = six different types</i>	<i>SD</i>	1.98	2.04	2.08	1.94	
	<i>n</i>	815	23	109	2728	
Sexual activity: frequency last 4 weeks	<i>M</i>	2.98 _a	3.26 _a	2.92 _{ab}	2.70 _b	19.71**
<i>1 = 0; 6 = 25 or more</i>	<i>SD</i>	.95	1.33	1.01	.81	
	<i>n</i>	626	19	84	2152	
Lifetime number of intercourse partners	<i>M</i>	5.18 _a	9.58 _b	6.05 _a	2.56 _c	75.37**
<i>Actual number</i>	<i>SD</i>	8.31	17.50	9.07	3.53	
	<i>n</i>	834	24	111	2957	

Mean adjustment and sexual activity as a function participant–partner age group

In Hochberg post hoc tests, means without a common subscript are significantly different

^aIn $F(3,-)$, the “–” is the df_w ; for each ANOVA, it is sum of the ns minus 4 in the measure

* $p < .05$; ** $p < .01$

Table 4 Participants ever told they had an STI (sexual transmitted infection) as a function of gender and participant–partner age group, in ISSHR

		Minor/peer	Minor < 16/adult	Minor 16–17/ adult	Adult/adult	$\chi^2(3)$
Males	%	4.5 _a	17.2 _b	12.0 _{ab}	2.5 _c	34.30**
	<i>n</i>	1056	29	50	1746	
Females	%	2.9 _a	4.2 _{ab}	8.1 _b	1.6 _a	26.51**
	<i>n</i>	832	24	111	2948	

In post hocs (Bonferroni-corrected z -tests), proportions for a given gender (i.e., across a row) without a common subscript are significantly different

** $p < .01$

Table 5 Effect sizes contrasting adult–adult versus each minor–other group on adjustment and sexual activity, from ISSHR

	Adult–adult versus		
	Minor/peer	Minor < 16/ adult	Minor 16–17/ adult
Males			
<i>n</i> (adult–adult) = 1754; versus <i>ns</i> (minor–other) =	1058	29	50
	<i>d</i>	<i>d</i>	<i>d</i>
Health in general	.00	.31	.23
Relationships in general: having problems	.08	.44	.19
Most recent sex partner: how satisfying emotionally, physically	.02	.18	.32
Self-confidence	.06	.03	.06
Highest level of education completed	.10	.32	.09
Job/career achievement	.32	.15	.33
Sexual problems	.05	.61	.37
Sexually transmitted infections (STI)	.32	1.15	.92
Sexual activity: frequency last 4 weeks	.21	.62	-.01
Lifetime number of intercourse partners	.34	.43	.54
Females			
<i>n</i> (adult–adult) = 2957; versus <i>ns</i> (minor–other) =	834	24	111
	<i>d</i>	<i>d</i>	<i>d</i>
Health in general	-.04	.44	.10
Relationships in general: having problems	.18	.20	.25
Most recent sex partner: how satisfying emotionally, physically	-.07	.10	-.04
Self-confidence	.17	-.12	.21
Highest level of education completed	.00	.35	.01
Job/career achievement	.23	.28	-.08
Sexual problems	.05	.01	.18
Sexually transmitted infections (STI)	.33	.54	.93
Sexual activity: frequency last 4 weeks	.32	.51	.24
Lifetime number of intercourse partners	.41	.56	.51

Effect sizes (Cohen's *d*) are positive if the adult–adult group had better adjustment or less sexual activity than the minor–other comparison group

Educational achievement Unlike males, level of education attained did not differ among female groups, with mean achievement falling at about the scale's midpoint in all groups (Table 3). Effects sizes were small (Table 5).

Job/career achievement Career achievement differed significantly among groups, with the adult–adult and minor (16–17)–adult groups exceeding the minor–peer group in post hoc analysis (Table 3). As with males, mean achievement in all groups fell between skilled manual labor and non-manual labor jobs. Effect sizes were small (Table 5).

Sexual problems Mean number of sexual problems did not differ among age groups, in which women with first intercourse with men had almost two out of six possible problems on average and other groups having about the same (Table 3). Effect sizes were small (Table 5).

Sexual risk (STI) Rates of STI differed significantly among groups, in which minors 16 to 17 with adults had a

significantly higher rate (8.1%) than adults with adults (1.6%) in post hoc analysis (Table 4). Girls under 16 with adults had a low rate (4%), noticeably smaller than that of boys under 16 with adults (17%), as reviewed above. Compared to women with men, the effect size was medium for girls under 16 with men (OR = 2.68, *d* = .54) and large for girls 16–17 with men (OR = 5.45, *d* = .93) (Table 5).

Frequency of sexual activity: last 4 weeks Adults with adults had a lower frequency of recent sex than girls with peers and girls under 16 with adults in post hoc analysis (Table 3). Compared to women with men, the effect size for girls under 16 with men was medium and for girls 16–17 with men small (Table 5).

Lifetime sexual partners As with boys under 16 with adults, girls under 16 with adults had more lifetime partners in sexual intercourse than those in the other three groups (Table 3). The effect sizes contrasting the adult–adult group with the minor–other groups were medium in all cases (Table 5).

Table 6 Characteristics of first sexual intercourse, by participant gender and participant–partner age group, in ISSHR

		Minor/peer	Minor < 16/adult	Minor 16–17/adult	Adult/adult	$\chi^2(3)$	$F(3,-)^a$
Males							
Willingness	%	98.5 _a	85.7 _b	85.7 _b	99.1 _a	91.82**	
<i>Willing (not talked into it or forced)</i>	<i>n</i>	1048	28	49	1735		
Force	%	0.2 _a	7.1 _b	0.0 _{ab}	0.0 _a	101.01**	
<i>Participant was forced</i>	<i>n</i>	1048	28	49	1735		
Relationship	%	52.9 _a	7.7 _b	24.0 _b	70.5 _c	154.37**	
<i>In one (e.g., steady, married)</i>	<i>n</i>	1057	26	50	1751		
Timing	%	79.0 _a	61.5 _a	73.5 _a	91.1 _b	99.41**	
<i>Intercourse was NOT too soon</i>	<i>n</i>	1048	26	49	1736		
Planning	%	37.5 _a	7.4 _b	30.0 _{ab}	50.9 _c	68.47**	
<i>Intercourse was expected</i>	<i>n</i>	1049	27	50	1730		
Favorability index	<i>M</i>	3.63 _a	2.57 _b	2.93 _b	4.06 _c		73.28**
<i>0 = Least; 5 = Most</i>	<i>SD</i>	.96	.66	.93	.90		
	<i>n</i>	958	23	41	1540		
Females							
Willingness	%	87.8 _a	52.2 _b	82.7 _a	94.7 _c	116.91**	
<i>Willing (not talked into it or forced)</i>	<i>n</i>	829	23	110	2929		
Force	%	1.1 _a	21.7 _b	0.0 _a	0.4 _a	159.71**	
<i>Participant was forced</i>	<i>n</i>	829	23	110	2929		
Relationship	%	79.3 _a	33.3 _b	66.7 _c	89.9 _d	156.02**	
<i>In one (e.g., steady, married)</i>	<i>n</i>	834	21	111	2954		
Timing	%	63.7 _a	27.8 _b	52.3 _{ab}	89.1 _c	396.06**	
<i>Intercourse was NOT too soon</i>	<i>n</i>	818	18	111	2921		
Planning	%	50.5 _a	26.3 _a	47.7 _a	66.0 _b	86.11**	
<i>Intercourse was expected</i>	<i>n</i>	822	19	111	2911		
Favorability index	<i>M</i>	3.78 _a	2.56 _b	3.41 _c	4.38 _d		118.70**
<i>0 = least; 5 = most</i>	<i>SD</i>	1.13	1.41	1.25	.87		
	<i>n</i>	753	16	99	2664		

In Bonferroni-adjusted z and Hochberg post hoc tests, proportions or means without common subscripts are significantly different

^aFor $F(3,-)$, “-” is the df_w ; for males, $df_w = 2558$; for females, $df_w = 3528$

* $p < .05$; ** $p < .01$

Effect Sizes: Summary

Mean effect sizes from Table 5 were computed, comparing adult–adult with each minor–other group. For males, mean $ds = .12$, $.40$, and $.31$ for minor–peer, minor (< 16)–adult, and minor (16–17)–adult, respectively. For females, the corresponding mean $ds = .11$, $.22$, and $.19$, respectively. These results indicate small effect sizes for all comparisons, except boys under 16 with adults, which was in the direction of medium.

The effect sizes for STI stood out as distinctly larger compared to those for the other adjustment measures, especially in three of the four minor–adult groups (both male groups and the older female group), where they were statistical outliers (i.e., $zs > 2$). STI is arguably also different in kind from the other adjustment measures. It is based

on pathogens compromising physiology, not experiences potentially affecting the functioning of the mind. The latter could reflect direct effects of the early sex, whereas the former could only reflect indirect effects. Therefore, as an alternative summary, mean adjustment effect sizes were recomputed without STI. For males, mean $ds = .09$, $.29$, and $.23$ for minor–peer, minor (< 16)–adult, and minor (16–17)–adult, respectively; corresponding effect sizes for females were $ds = .07$, $.18$, and $.09$, respectively. These effect sizes were all small.

Characteristics of First Intercourse

Table 6 shows various characteristics of participants’ first-intercourse experience in relation to participant–partner age group and participant gender. These characteristics include

Table 7 Effect sizes contrasting adult–adult versus each minor–other group for characteristics of first intercourse, from ISSHR

	Adult–adult versus		
	Minor/peer	Minor < 16/adult	Minor 16–17/adult
Males			
<i>n</i> (adult–adult) = 1705; versus <i>ns</i> (minor–other) =	1035	26	48
	OR	OR	OR
Willingness	1.67	17.91	17.91
Force	–	–	–
Relationship	2.13	28.64	7.56
Timing	2.71	6.38	3.68
Planning	1.73	12.97	2.42
Females			
<i>n</i> (adult–adult) = 2858; versus <i>ns</i> (minor–other) =	814	20	109
	OR	OR	OR
Willingness	2.48	16.41	3.74
Force	.37	.01	–
Relationship	2.33	17.83	4.46
Timing	4.67	21.28	7.48
Planning	1.90	5.43	2.12

Odds ratio effect sizes (OR) > 1 if adult–adult group had more favorable first-intercourse circumstances (according to conventional standards or ideals of our society), compared to the minor–other comparison groups for willingness, relationship, timing, and planning. OR < 1 if adult–adult group had less force than comparison group

“–” indicates not computable

whether the participant was willing (i.e., not talked into it or forced, but wanted it), the participant was forced, the intercourse occurred within a relationship, the participant felt it did not occur too soon, and the participant was expecting it to happen with the partner at hand. For all characteristics for both male and female participants, significant differences between the participant–partner age groups emerged. Magnitudes of difference (i.e., odds ratios) are shown in Table 7.

Males

Willingness The man–adult and boy–peer groups were more willing than both boy–adult groups. Notably, however, in each boy–adult group, a large majority of participants was willing (87.5%).

Force Boys under 16 with adults were forced more often than males in age-equal groups, although the rate of

their being forced was low (7.1%). Boys 16–17 with adults reported no force.

Relationship Boys under 16 with adults rarely were in relationships with their partner (7.7%), in sharp contrast to boys with peers (52.9%) and men with adults (70.5%).

Timing In the vast majority of cases, men with other adults felt the event was not too soon (91.1%), which was greater than in all minor–other groups. Nevertheless, a majority of boys under 16 with adults (61.5%) and nearly three-quarters of boys 16–17 with adults (73.5%) also felt that the intercourse was not premature.

Planning Half the man–adult participants expected the intercourse to occur (50.9%), in sharp contrast to boys under 16 with adults (7.4%) and boys 16–17 with adults (30%).

Favorability index In an attempt to combine the above characteristics for an overall view, a “favorability index” was computed ($\alpha = .52$). Favorability was defined by what is conventionally viewed as “favorable” in sex—wanted, in a relationship, not too soon, expected, and not forced. A participant’s index was the sum of responses (0 = no, 1 = yes) to the first four variables in this list, minus the response to being forced (0 = no, 1 = yes), and with 1 point added, such that the index ranged from 0 (least favorable) to 5 (most favorable).

Mean favorability differed significantly among the male age groups (Table 6), in which men with other adults had the highest favorability index in post hoc analysis, and minors with adults the lowest.

Females

Willingness The woman–man group was the most willing (94.7%). Girls under 16 with men were willing half the time (52.2%), while girls 16–17 with men were willing most of the time (82.7%).

Force Force was rare or absent in all groups except for girls under 16 with men (21.7%).

Relationship Women with men mostly had their first intercourse within a relationship (89.9%), in contrast to girls under 16 with men (33.3%) and girls 16–17 with men (66.7%).

Timing Women with men also mostly felt that the event was not too soon (89.1%), in sharp contrast to girls under 16 with men (27.8%) and girls 16–17 with men (52.3%).

Planning Two-thirds of women with men expected the intercourse to occur (66.0%), in contrast to a quarter of girls under 16 with men (26.3%) and nearly half of girls 16–17 with men (47.7%).

Favorability index All four age groups differed significantly from one another in the index for favorability of circumstances in the sex. Women with men had the highest mean, followed by girls with peers, then girls 16 to 17 with men, and finally girls under 16 with men.

Table 8 Phi coefficients (*rs*) between participant gender (male vs. female) and first-intercourse characteristics or reasons, in ISSHR

	Minor/peer	Minor < 16/adult	Minor 16–17/adult	Adult/adult
<i>n</i>	1849	45	158	4577
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Characteristics, males were				
More willing	.22**	.37**	.04	.11**
Less forced	.06*	.21	.00	.04**
Less in a relationship	.27**	.32*	.40**	.25**
More ready (i.e., not too soon)	.17**	.33*	.20*	.03*
More spur of moment (i.e., unexpected)	.13**	.26	.17*	.15**
Reasons, males were				
More wanting to lose virginity	.27**	.11	.24**	.14**
Less being in love	.28**	.44**	.35**	.24**
Other	.07**	.00	.04	.05**

n = mean of *ns* across measures. Correlations also serve as effect sizes for magnitude of differences between male and female participants

p* < .05, two-tailed; *p* < .01 two-tailed

Effect Sizes

Table 7 shows the OR effect sizes (i.e., odds of favorable circumstances in the adult–adult group versus the odds in each minor–other group) for the above comparisons. In general, ORs were small for minor–peer sex, medium for minors 16–17 with adults, and large for minors under 16 with adults. This trend was also reflected in the favorability index, with means shown in Table 6. In comparing the adult–adult standard with minor–peer, minor (16–17)–adult, and minor (< 16)–adult, respectively, Cohen’s *d* for males went from medium (*d* = .46), to quite large (*d* = 1.23) to very large (*d* = 1.89). The corresponding comparisons for females were: *ds* = .59 (medium), .90 (large), and 1.55 (very large), respectively. In short, adults with adults had different first-intercourse experiences compared to minors with others, especially with adults.

Gender Contrasts

It was next of interest to compare male and female participants on characteristics of first intercourse. Results of analysis are shown in Table 8. In the table, phi coefficients (i.e., *rs*) between gender and characteristic are shown for each participant–partner age group. These correlations also served as effect sizes. In addition, correlations between gender and reasons for engaging in the first intercourse are shown. In a preliminary analysis, only two reasons stood out: wanting to lose virginity and being in love. These items are shown in the table. The remaining reasons were combined into an “other” variable, shown last.

Four variables stood out in consistently distinguishing the genders across all participant–partner age groups. Males had first intercourse less often within a relationship, they were more ready for the experience (i.e., they did not feel it was too soon), the event was more unexpected for them (i.e., more spur of the moment), and they were less often in love when they did it.⁸

In terms of minors under 16 with adults, the effect sizes contrasting the genders for characteristics ranged from medium to large, *r* = .21 to .37, with a mean *r* = .30, of medium–large size. This mean exceeded considerably those in the other groups: minor–peer (*r* = .17), minor (16–17)–adult (*r* = .16), and adult–adult (*r* = .12). On the key variable of willingness, often a focus in CSA research (e.g., Rind et al., 1998), the effect size was large (*r* = .37) for minors under 16 with adults, meaning that younger boys with adults were more willing than younger girls with men to a sizable degree (85.7% vs. 52.2%, respectively, in Table 6). By contrast, for minors 16 to 17 with adults, the effect size was near zero (*r* = .04), with rates of willingness nearly the same: 85.7% (boys); 82.7% (girls).

For minors under 16 with adults, related to willingness was readiness, with a large effect size difference (*r* = .33), where boys more than twice as often felt the experience was not too soon compared to girls (61.5% vs. 27.8%, respectively, in Table 6). Finally, for minors under 16 with adults, in terms of reasons for engaging in the first intercourse, a large effect size (*r* = .44) emerged regarding being in love, where this reason much less characterized boys’ motives (7.4%) than girls’ motives (44.4%).

⁸ The minor (< 16)–adult *r* = .26 was marginally statistically significant, while the other correlations for this variable were significant.

Table 9 For minor–adult cases, variance explained in Model 1 and variance increase in Model 2 in regressions of adjustment constructs on age at first intercourse, partner age difference, and their interaction, shown separately by gender, from ISSHR

Adjustment construct	Males		Females	
	R^2	ΔR^2	R^2	ΔR^2
Health	.02	.01	.01	.00
Relationships in general: Having problems	.05*	.00	.02	.00
Most recent partner: Emotionally, physically satisfying	.10**	.03*	.13**	.00
Self-confidence	.04	.05**	.01	.00
Highest level of education completed	.02	.01	.03	.00
Job/career achievement	.04	.01	.02	.00
Sexual problems	.06*	.00	.03	.00
Sexual risk (STI)	.03	.01	.01	.02

Model 1 R^2 based on regressors “age at first intercourse” and “partner age difference.” Model 2 changed R^2 based on addition of Model 1 interaction term. In ANOVAs testing R^2 significance, df_{reg} was 2 in first model, 3 in full model. df_w for males ranged from 92 to 96; for females, from 106 to 110. Sexual risk was analyzed via logistic regression; its R^2 is Cox and Snell. Analyses were weighted

* $p < .10$, ** $p < .05$

Mediation and Moderation Analyses

The analyses to follow were supplemental to the main analyses just presented. They were exploratory, not comprehensive, but potentially informative on nuances of adjustment correlates of minor–adult sexual intercourse. One key mediation analysis is presented, followed by several moderation analyses.

Mediation

Previously, it was found that boys under 16 with adults had a substantially elevated rate of STI compared to the other male age groups (Table 4). But it was also found that they had substantially more lifetime sexual-intercourse partners (Table 2). It could be that having early sex for postpubertal boys substantially increases lifetime sexual-intercourse partners (as Kinsey et al., 1948, showed), and more partners, in turn, sizably increases STI risk, such that the minor–adult sex may play an indirect—but not direct—role in relation to increased STI (Laumann et al., 1994, offered this basic argument). To test this possibility, a mediation analysis was conducted, following the steps suggested by Baron and Kenny (1986) and Hayes (2018).

In a series of weighted regressions using all male participants who had intercourse, the independent variable (X) was age-group membership in the minor (< 16)–adult group (0 = no; 1 = yes), the mediator (M) was number of lifetime sexual-intercourse partners (transformed via the natural logarithm to normalize the distribution), and the dependent variable (Y) was STI (0 = no; 1 = yes). First, in a simple logistic regression, regression of STI on age-group membership was significant, $b = 1.70$, $\chi^2(1) = 14.50$, $p < .001$. Second, in a linear regression, regression of number of lifetime partners on age-group membership was significant, $b = .91$,

$t(3361) = 5.76$, $p < .001$. Third, in a multiple logistic regression regressing STI on age-group membership and number of lifetime partners, number of lifetime partners (controlling for age-group membership) was significant, $b = 1.04$, $\chi^2(1) = 149.30$, $p < .001$, whereas age-group membership (controlling for number of lifetime partners) was no longer significant, $b = .91$, $\chi^2(1) = 3.17$, $p > .05$. These steps, supplemented with a significant result in a Sobel test ($z = 5.21$, $p < .001$), indicated full mediation.

Moderation

Moderation occurs when the relationship between an independent variable (X) and a dependent variable (Y) changes with different levels of a third variable, a moderator (W). In testing moderation, a key element is to show that the interaction (i.e., product) of X and W is significant. Showing this is done via hierarchical regression, in which X and W are entered in Step 1 as regressors, and then the interaction term is added in Step 2. Both models should be significant, and a significant increase in the variance accounted for (R^2 change) in the second model is consistent with moderation (Hayes, 2018).

Previously in the present study, age and age difference were examined as categorical variables in relation to possible differences in current adjustment. Here, they were examined as continuous variables, focusing just on minor–adult cases. Age was designated as the independent variable (X), given the view in CSA research that younger ages are more vulnerable to harm. Age difference was designated as the moderator (W), given the assumption that this is an aggravating factor (e.g., Hyde & DeLamater, 2017, as discussed previously). The dependent variables (Y's) were the adjustment measures taken from Tables 2 through 4. A series of weighted hierarchical regressions was performed, first regressing each Y on

X and W and then adding the interaction term (XW) in the next step. Table 9 shows the results in terms of the variance accounted for in step 1 (Model 1) and the increase in variance accounted for in step 2 (Model 2) with the addition of the interaction.

For most measures, no evidence occurred for main effects or moderation, indicating that age at first intercourse and age difference were broadly not related to adjustment. For males, several measures were marginally significant in Model 1 (i.e., relationship problems, sexual problems), indicating a trend in association between younger ages at first intercourse and greater problems. A model involving self-confidence was significant, but only with the addition of the interaction term. Interpreting the interaction via graphical visualization (Hayes, 2018) indicated that older age at first intercourse interacted with greater age difference to lower self-confidence the most. The preceding findings are tentative, however, owing to marginal significance (and the problem of experiment-wise error) or incomplete criteria for satisfying moderation.

Only for one measure were Models 1 and 2 significant (for both males and females): emotional–physical satisfaction with most recent partner. These results are examined next.

Girls with adults: satisfaction with most recent partner Model 1 was significant, $F(2, 112) = 8.04, p = .001, R^2 = .13$. Age was a significant regressor, $t(112) = 3.13, p < .01$, semi-partial $r = .28$ (older age at first intercourse was associated with more satisfaction with most recent partner), but age difference was not, $t(112) = -.52, p > .10$, semi-partial $r = .05$. In Model 2, the R^2 change (.00) after adding the interaction was not significant, $p > .10$, suggesting no moderation.

Focusing on age at first intercourse in its relationship with satisfaction, a series of moderator analyses was performed, using as moderators the circumstances of the sexual event listed in Table 7 (i.e., willing, forced, timing, in a relationship, expected, favorability index). Each circumstance was run in a separate analysis. Only force yielded results suggestive of moderation. The first model was significant, $F(2, 109) = 8.32, R^2 = .13$, and adding the interaction in Model 2 yielded a marginally significant increase in R^2 (change = .02), $p < .10$. Visualizing the interaction graphically indicated, paradoxically, that force combined with older age at first intercourse yielded higher adult satisfaction with most recent partner.

Boys with adults: satisfaction with most recent partner Model 1 was significant, $F(2, 93) = 5.28, p = .007, R^2 = .10$. Age at first intercourse was a marginally significant regressor, $t(97) = -1.91, p = .06$, semi-partial $r = -.18$, while age difference was a significant regressor, $t(97) = -3.11, p < .01$, semi-partial $r = -.30$. In Model 2, the R^2 change (.03) when adding the interaction was marginally significant, $p = .06$, in which both main effects (age and age difference) lost their significance ($ps > .10$). These results were suggestive of full moderation by age difference. Visualizing the results

indicated that satisfaction became least with the interactive combination of large age difference and older age at first intercourse.

Next, age difference was focused upon in its relationship with satisfaction, given its stronger relation to satisfaction, as noted above. Using the same set of moderators as above for females, only force emerged as a potential moderator. Model 1 was significant, $F(2, 93) = 5.23, p < .01, R^2 = .10$, and adding the interaction of age difference and force in Model 2 significantly increased explained variance (R^2 change = .06), $p = .01$. In this model, age difference and force individually remained significant ($ps < .05$), indicating partial rather than full moderation. Visualizing the results indicated that sexual satisfaction decreased to its lowest levels with the interactive combination of presence of force and smallest age difference.

Discussion

Two competing perspectives were tested in the present study. The dominant perspective, exemplified in Hyde and DeLamater's (2017) review, but also a staple in much of child sexual abuse (CSA) research since the early 1980s (Rind et al., 1998), holds that CSA is damaging in most cases, especially when the sex involves intercourse and the partners are very different in age. An alternative perspective, drawing from empirical results from a series of recently published studies employing large-scale general samples (i.e., nationally representative; Kinsey), suggests specifically that minor–adult sexual intercourse would not be associated with pervasive and intense harm. To test these competing views, the Irish Study of Sexual Health and Relationships (ISSHR) was employed. This study was probative because it was nationally representative, had data on participant and partner ages at first intercourse, and provided results on adult adjustment in a variety of domains: health, general relationships, self-confidence, education and career achievement, and sexual problems. Results of the analyses favored the alternative perspective, based on considering three criteria: significance results, effect sizes, and mean adjustment.

Significance Results, Effect Sizes, Mean Adjustment

For female participants, statistical significance was rarely reached when comparing adjustment among participants with adult–adult first intercourse versus minor–adult first intercourse—significance was reached in only one of 16 tests. In terms of effect size, all but two were small for the minor (< 16)–adult group (the other two were medium) and all but one were small for the minor (16–17)–adult group (the other was large). Mean effect sizes across measures were small for both minor–adult groups.

For male participants, significance was reached more often, in almost half the tests. Most effect sizes were small ($n=5$) or medium ($n=2$) in the minor (<16)–adult group—one was large. In the minor (16–17)–adult group, most were small ($n=7$), with one being medium. The mean effect sizes in these two groups were, respectively, medium–small and small when including the STI measure. As argued previously, STI is a pathogen-based condition, different in kind from problems of psychological origin interfering with normal functioning. It was also noted that STI was a statistical outlier in terms of effect size among the adjustment measures in both male minor–adult groups ($z_s > 2$). Adding to these points, its correlation was near zero with the sexual-problems construct in the male minor–adult sample ($r = .03$) and general male sample ($r = .04$), suggesting that it is distinct from sexual adjustment of a psychological origin. In the mediation analysis summarized previously, STI was shown not to reflect a direct effect of the intercourse experience in the case of male minors under 16 with adults. These considerations taken together suggest omitting STI when computing mean adjustment effect sizes for males. Without STI, effect sizes were small ($n=5$) or medium ($n=2$) for the minor (<16)–adult group and all small ($n=7$) for the minor (16–17)–adult group, with mean effect sizes being small for both groups.

Thus, for females, the significance results and effect sizes were consistent with the alternative perspective. For males, results were mixed for significance tests but consistent in terms of effect size when omitting STI. Interpretation of these results can be advanced by consideration of the third criterion discussed previously—mean response.

Minors with adults on average, on par with the other groups, had “good” to “very good” health, were emotionally and physically “very satisfied” with their most recent sexual partner, and endorsed a high amount of self-confidence. They disagreed on average to having most kinds of relationship problems, and their educational achievement was on par with other groups and the general population. Their career achievement was generally poorer than adults with adults, but comparable to minors with peers—the difference obtained here could be attributable, for example, to unmeasured factors such as family and peer environment or genetics, which could have led to early sexual intercourse and independently later on to poorer jobs (for a review, see Harden, 2014). Girls with adults had no more sexual problems than age-equal groups. For boys with adults, such problems were elevated in relative terms, but still low on the scale in absolute terms. Overall, minors with adults appeared to be essentially normal in their adult adjustment based their response profile.

In short, these three approaches in combination were mostly consistent with the alternative perspective rather than the dominant perspective. Minor–adult first intercourse was associated with less good adjustment on a number of measures (mostly just for boys), but still with *good* rather than

poor adjustment, contradicting basic claims and assumptions made and held within the dominant perspective.

Other Research Questions

The foregoing discussion dealt with the principle research question concerning adjustment in the minor–adult versus adult–adult groups. Two other research questions raised at the outset involved whether the two minor–adult groups would differ in adjustment and how the minor–peer group would compare in adjustment relative to the adult–adult group. Regarding the former, the results were negative: The two groups did not differ significantly on any adjustment measure for either gender, contrary to expectations from the dominant perspective. Regarding the latter, findings were consistent with both the dominant and alternative perspectives: Minor–peer versus adult–adult differences were generally not significant and never sizable.

Consideration of the Relative Success of the Alternative Perspective

Regarding the relative success of the alternative over dominant perspective concerning the first two research questions, key issues to consider involve the definition of CSA, sampling, inference, effect size, and causation. In research, CSA has most often been defined as any sexual behavior involving a minor (e.g., under age 18) with someone significantly older (e.g., 5 years or more). This definition is the one used in the law, conveyed in media discussions, and generally understood by the public. This is also the definition used in the empirical studies forming the basis for the alternative perspective. In this defining, both unwanted *and* willing events are allowed for, such that findings apply to the population of minor–adult sexual events, as commonly understood. More restrictive definitions, which allow for only unwilling minor–adult sexual events, are the ones commonly employed in studies cited to support the dominant perspective. Compounding the problem is that these studies often also include coerced minor–peer sexual experiences, which further confounds inference (e.g., Hyde & DeLamater, 2017). Research findings with this definitional approach cannot be assumed to extend to the CSA population as generally understood—the population that is the chief interest of the law, the media, and the public. Nevertheless, studies with these restrictive definitions routinely make this inference (Rind & Tromovitch, 2007). Another problem in sampling is that clinical or quasi-clinical studies have frequently been used to investigate effects, and findings have often been assumed to extend more broadly, when analysis of representative samples shows they do not (Rind & Tromovitch, 2007). Complicating matters still further, statistical significance is often seized upon in the dominant perspective as evidence of “intense” harm, when

actual differences between CSA and control groups may be small, even though statistically significant, and differences may be attributable to third variables instead of reflecting CSA causation (Rind et al., 1998). Hence, size of differences (i.e., effect sizes) needs to be taken into account to evaluate whether poorer adjustment is “intense,” and third variables need to be carefully considered before inferring causation from observational studies. The weaknesses just listed have often obtained in studies and reviews cited to support the dominant perspective, but are avoided in much of the research focusing on the alternative perspective, including the present study. These differences in approach help to account, at least in part, for the relative success of the alternative over the dominant perspective in the present analyses.

Gender Differences in First-Intercourse Characteristics, Motives

In general, males (men, boys) compared to females (women, girls) were more willing in their first intercourse, felt more ready for it, wanted more to lose their virginity, and did it more often on the spur of the moment. Moreover, they were less often in relationships when it occurred or in love as a reason for doing it.

These gender differences were most pronounced in minors under 16 with adults, where the mean effect size contrasting boys’ versus girls’ characteristics of first intercourse was $r = .30$, considerably larger than mean effect sizes for the other participant–partner age groups, which ranged from $r = .12$ (adult–adult) to $.17$ (minor–peer). For under 16 with adults, boys compared to girls were considerably more willing to engage in the intercourse (86% vs. 52%, respectively), less often forced (7% vs. 22%) or in a relationship when it happened (8% vs. 33%), much more ready for it when it did happen (62% vs. 28%), more likely to do it on the spur of the moment (93% vs. 74%), and much less motivated to do it out of love (7% vs. 44%). These differences are all consistent with boys being more interested than girls in the experience for its own sake and feeling greater agency when engaging in it.

Other research has found similar gender differences when contrasting mostly postpubertal boys and girls in their responses to minor–adult sex. Felson et al. (2019), in their Finnish nationally representative sample, found that boys with adults reacted much less negatively than girls with adults (e.g., negative reactions at the time, 12% vs. 46%, respectively), and they initiated the sex with adults more than five times as often (37% vs. 7%, respectively). Rind and Welter (2014), using the Kinsey sample, found that 63% of pubescent boys enjoyed “much” their first coitus with women, versus only 17% of pubescent girls with men. Gebhard, Gagnon, Pomeroy, and Christenson (1965), using Kinsey forensic data, found that postpubertal boys compared to girls were substantially more receptive and proceptive (i.e.,

willing, encouraging) regarding sex with adults. They attributed this difference to more strongly developed libidos in postpubertal boys, adding that these libidos often are equal to or in excess of those in adult men. In a similar vein, Felson et al. (2019) attributed the gender differences they found to a stronger sex drive in boys (especially when postpubertal), greater indiscriminancy when engaging in sex, and a greater willingness to engage in deviant behavior. Here, it can be added that social expectations (e.g., stereotypes of what boys and girls should or should not do sexually), which differ by time and place, are also likely to play a role in gender differences (e.g., by amplifying or suppressing biologically based tendencies).

The attributions of Gebhard et al. (1965) and Felson et al. (2019) find support in the primate literature. For example, Anderson and Bielert (1990), in their review of immature male sexuality in numerous primate species, concluded that “sexual interaction between adult females and immature males is universal” in nonhuman primates (p. 192), in which immature males typically display both eagerness and initiative in attempting coitus with adult females (Dixson, 2012; Gunst, Leca, & Vasey, 2013; Hashimoto, 1997; Kano, 1980; Kollar, Beckwith, & Edgerton, 1968). These primatologists interpreted this behavior as functional in helping immature males acquire adult-like skills, critical to their later reproductive success. In nonhuman primates, the reverse (i.e., eager immature females with accommodating adult males, with a useful or functional basis) does not tend to obtain. Arguably, this comparative perspective offers a more parsimonious scientific explanation for human postpubertal gender differences than explanations from the dominant perspective (CSA paradigm), which presume boys’ greater eagerness is a maladaptation caused by defective cultural values and attitudes or indoctrination by their older partners (e.g., Ondersma et al., 2001).

Mediation, Moderation

From supplemental analyses of male participants, several findings of note emerged. First, STI, one of the variables commonly used in CSA research to attempt to establish evidence of harmful effects, was the focus of a mediation analysis. It was shown that membership in the “boys under 16 with adults” group was not directly related to STI, even though STI in this group was highly elevated. Instead, membership in this group was directly related to more lifetime sexual-intercourse partners, which fully mediated the relationship. In research from the dominant perspective, the mediator (increased sexual partners) has been assumed to be a dysfunctional effect of factors such as increased anxiety, hostility, and other emotional problems, which have been assumed to be directly caused by the minor–adult sex (e.g., Lloyd & Operario, 2012). In this thinking, the emotional problems have

been assumed to distort perceptions, decision making, and behavior, which lead to sexual risk such as multiple partners, and ultimately to outcomes such as increased STI. Results from the present study, the recent Felson et al. (2019) study, and the Kinsey sample (Rind & Welter, 2014) contest the dominant perspective's line of reasoning. They show that, for postpubertal boys, sexual contact with adults (especially women, and especially intercourse) is largely appetitively based, lacking in the trauma and trauma-related maladjustment presumed in the dominant perspective. Thus here, the increased sexual activity (including more partners) may have been simply a product of sex being appetitive, interacting with postpubertal boys' strong libidos (Gebhard et al., 1965; Kinsey et al., 1948), rather than a result of trauma and its distortions.

These considerations suggest that the link between sexual risk and minor–adult sex is more complex than is reflected in the literature (e.g., see Senn, Carey, & Venable, 2008, for a review). STI is clearly a negative condition, but it is a disease caused by pathogens, not an inability or reduced ability to think, behave, or feel because of an emotionally or psychologically upsetting experience, which has been the chief claim in the dominant perspective (Rind et al., 1998). The present study and the other relevant evidence reviewed suggest that this negative path (negative experience to risky behaviors to negative outcome) does not accurately apply, at least for adolescent boys involved with women.

Early sex with women is associated with more intercourse partners and thus to higher rates of STI, and this relationship would be problematic if it is a causal one, but even if causal it is not necessarily an essential outcome. For example, as a hypothetical, if early teens were inculcated and encouraged in safe sex practices, then STI would likely fall out of the relationship. This hypothetical is not a prescription, but rather to argue that STI is unlike the other adjustment measures examined in this study. Examining it separately rather than as an ordinary adjustment issue in CSA research is therefore suggested.

Moderation analyses extended the main analyses based on the categorical variables of age at first intercourse and partner age difference to consideration of these two variables as continuous, with the former being viewed as the independent variable and the latter the moderator. In brief, variations in these variables had no association with most adjustment measures or constructs. One notable exception was satisfaction (emotional, physical) with most recent partner. For girls with adults, younger age at first intercourse was associated with less satisfaction later on, although age difference did not figure in. Additional moderator analyses suggested that partner use of force moderated the age–satisfaction relation—although in an unexpected manner (i.e., force, combined with older age, was associated with increased, rather than decreased, satisfaction). For boys with adults, evidence

for full moderation did occur, in which age difference moderated the age–satisfaction relation, though in an unexpected way (i.e., older, rather than younger, first age, in combination with larger age difference, depressed satisfaction). Additional moderator analyses again pointed to force as the main circumstantial factor potentially influencing satisfaction. Using age difference as the independent variable, partial moderation by force was demonstrated, in which satisfaction was least when force was combined with the smallest, rather than largest, age differences—another unexpected result. In short, age and age difference, as well as circumstances of the event, had limited association with adjustment, and when they did, the association was often in unexpected ways.

Limitations and Qualifications

One limitation is that the results concerning minor–adult sex, as well as minor–peer sex, apply mostly to postpubertal heterosexual intercourse (i.e., when minor participants were adolescents). Few cases involved same-sex intercourse or child participants. A second issue concerns the measures of adjustment in the ISSHR, where single items rather than standard measures were employed. Despite this, it should be noted, in meta-analyses of CSA in national and college samples, both types of measures yielded essentially the same results (Rind & Tromovitch, 2007; Rind et al., 1998). A third issue concerns internal consistencies (i.e., Cronbach's alphas), below .70 for some of the combined measures. As argued previously (footnote 4), this issue was not expected to present problems in the present study. That it did not is shown by comparing results of analyses for combined measures of concern (shown in tables) with those of their constituent single items (not shown in tables). For the two composites of concern involving adjustment, relationship problems ($\alpha = .57$) and self-confidence ($\alpha = .52$), effect sizes were mostly consistent between single and combined measures.⁹ A fourth issue involves mean year of first intercourse, which was earlier for girls under 16 with adults compared to the other age-group conditions. The reason is unclear—the concentration of such cases earlier on may reflect less attention and therefore controls against it, which changed in the 1980s and beyond, when this issue was coming more into public attention. The effects of the mean time-period difference on adjustment measures is also unclear, but, based on the mostly small effect sizes, one speculation is that these results reflect the mitigating effects of having had the experiences on average before they

⁹ For 6 of 8 cases, taking into account both male and female participants, composite and individual-item effect sizes were fully consistent—very small went with very small, small went with small, and small–medium went with small–medium. In two cases, composite effect sizes represented averages of more varying individual-item effect sizes.

were colored with the intensely negative input that began to dominate public and professional discourse in the 1980s and afterward.

Another issue concerns the comparison groups. It is possible that some members of the adult–adult groups experienced minor–adult sex, although not intercourse, which they had for the first time as adults. That is, these groups were likely not pure comparison groups in the traditional sense (i.e., lacking minor–adult sex). It could thus be argued that these groups may have performed more poorly on adjustment measures because of contamination from cases of non-intercourse minor–adult sex, which in turn could have weakened the adjustment differences with the minor–adult groups. First, the dominant perspective has long held that intercourse is the “severest” form of minor–adult sex, with greatest negative impact (Rind et al., 1998). If so, clear, consistent, and sizable differences should have occurred between the minor–adult and adult–adult groups, but they did not. Second, studies based on national samples that have separated out comparison groups with no minor–adult sex have found small effect sizes in comparing them with minor–adult sex groups (Rind & Tromovitch, 2007), such that it is implausible that the adjustment in adult–adult groups in the present analyses was weakened to any meaningful degree by possible inclusion of some cases of minor–adult sex.

Still another point concerns the generalizability of the Irish national data to other nations or cultures. The meta-analysis of national samples by Rind and Tromovitch (2007), which drew from five Western countries not including Ireland, suggests that the Irish adjustment results may be generalizable across the West. The Finnish national sample (Felson et al., 2019), as well as the Kinsey data, suggests that the gender differences in characteristics of the sex in the Irish sample may generalize. Nevertheless, additional analyses of nationally representative samples from other nations regarding first intercourse are needed to more fully address this issue. Also needed to take into account are sexual intercourse patterns and correlates in non-complex societies, which dominated across humans until recently, and in which onset of sexual intercourse was most typically during adolescence, with age discrepancy a common feature (Whiting, Burbank, & Ratner, 2009).

Last but not least, it is important to note that the present findings should not be construed as challenging moral stances within our society regarding minor–adult sex. Sexual behaviors can be immoral while not being intrinsically or otherwise harmful or pathological (Rind et al., 1998). That was one of the clear lessons of Ford and Beach’s (1951) seminal cross-cultural review of sexual behavior patterns, in which they showed that, based on cross-cultural, cross-species, and evolutionary considerations, various forms of sex considered highly immoral in our own society nevertheless mostly likely had natural, non-pathological origins.

Moral inference and scientific inference regarding harmfulness are not equivalent, and yet are often conflated, as has been demonstrated experimentally (e.g., Gray, Schein, & Ward, 2014) and shown anthropologically (e.g., Douglas, 1966). Gray et al. constructed scenarios of impure, immoral acts (mostly sexual in nature) that logically could not have been harmful (i.e., “harmless wrongs”), and yet study participants strongly tended to infer harm anyway. Douglas, in a classic review, documented how frequently peoples in pre-industrial societies attributed physical and mental harms to acts considered immoral and impure in their cultures (e.g., adultery, inappropriate gender mixing), acts that have been less immoral or normative in many other societies, including ours, where such harm inferences would not be made. Whiting et al. (2009), in their authoritative cross-cultural review of ages of marriage, documented that pubertal marriage for girls accompanied by pubescent sexual intercourse has been the basic pattern across simple and midlevel societies, a pattern having an evolutionary basis and having served such societies adequately throughout human history. They noted that the much delayed marriage patterns in complex societies such as ours are not intrinsically healthier or more normal, rather they are solutions to complex living, social, and economic arrangements. They emphasized that their findings did not challenge our sexual morals, but that it was important for researchers not to conflate our morals with scientific inference. Whiting et al.’s comments apply exactly to the findings in the present study.

Concluding Remarks

Analysis of the ISSHR data complements the Rind and Welter (2014) analysis of the Kinsey data in indicating that both reactions at the time and long-term adjustment in response to adolescent–adult first heterosexual intercourse are much less problematic for the adolescents involved than would be expected from media presentations, political discourse, legal treatment, clinical opinion, and dominant thinking by psychological researchers. Additionally, these analyses indicate that the event is sizably different for younger adolescent boys versus girls in our culture, in which the former approach it with greater agency and for whom the experience is more appetitive. Finally, though this behavior misfits modern, complex societies, anthropological and primatological surveys (e.g., Anderson & Bielert, 1990; Whiting et al., 2009) caution against translating cultural mismatch into intrinsic pathology in scientific discussions.

Compliance with Ethical Standards

Conflict of interest There were no conflicts of interest, and the research is secondary research on the ISSHR data, so informed consent is not an issue.

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