

An assessment of the predictive ability of a measure of 'sexual competence' at sexual debut using data from the Third National Survey of Sexual Attitudes and Lifestyles (NATSAL-III)

Introduction

Chronological age at first sex has long been the focus of research concerned with sexual behaviour among young people; particular emphasis is given to whether first sex occurred before or after the age of 16 – the legal age of consent in many countries (AVERT, 2011). However, young people are a heterogeneous group with varying individual characteristics and circumstances, meaning it may be inappropriate to generalise about the acceptability and the nature of sexual activity simply according to age at sexual debut.

Age at first sex has been associated with multiple sexual health outcomes later in life; those who engage in sexual intercourse at younger ages have been found to be at higher risk of STIs (Kahn et al., 2002, Kaestle et al., 2005, Eberhart-Phillips et al., 2001), motherhood and abortion before 18 (Wellings et al., 2001), and engaging in sexual-risk behaviours (de Sanjose et al., 2008, Santelli et al., 1997, Humblet et al., 2003).

However, it has been argued that chronological age is an overly crude measure of the nature and appropriateness of first sexual intercourse; older age alone does not necessarily safeguard sexual health status. Existing research has found that psycho-social conditions of first intercourse are associated with subsequent adverse sexual health outcomes, independently of age. Reissing et al (2012) reported that affective reaction to sexual debut was associated with current sexual adjustment among a sample of young adults in Canada. A negative context of first intercourse (defined as being the result of influences external to the self) was associated with more sexual dysfunctions, more sex guilt, poorer health, more STIs and less life satisfaction, in a study of adults living in the US (Else-Quest et al., 2005). Smith and Shaffer's (2013) study found that even when controlling for overall sexual satisfaction, the experience and feelings about first sex had implications for the experiences of subsequent sexual interactions, with negative experiences of first intercourse being associated with negative feelings about current sexual encounters, and positive accounts of first intercourse being predictive of more positive experiences in current sexual interactions.

In an attempt to provide a more nuanced measure of the onset of sexual activity, Wellings et al. (2001) developed a measure of 'sexual competence' at first sex using data from second British National Survey of Sexual Attitudes and Lifestyles (NATSAL-2). This measure, made up of respondents' self reports regarding the circumstances of their first heterosexual intercourse, aims to provide a more holistic assessment of the sexual encounter based on physical, social, and emotional dimensions of health, in accordance with the definition of sexual health endorsed by the World Health Organization. NATSAL respondents were classified as having been 'sexually competent' at sexual debut if they endorsed the following four items: contraceptive protection, autonomy of decision (not due to external influences such as peer pressure or alcohol), equal willingness of both partners, and absence of regret (that it happened at the 'right time').

The current study presents analyses using data from the most recent NATSAL-3 survey to explore whether the measure 'sexual competence' at sexual debut is predictive of subsequent sexual health in a population-based sample of British 16-24 year olds. In evaluating whether the measure of sexual competence is useful for research and public health efforts, an important consideration is whether sexual competence at sexual debut is predictive of subsequent sexual health

Just as the measure of sexual competence at sexual debut aims to provide a comprehensive measure of the first sexual encounter, the outcomes of interest in this study also aim to cover more than just the reductionist view of sexual health. Measures of STI acquisition and unplanned pregnancies are used in order to indicate the physical state of health of respondents, while a measure of sexual function accounts not only for physiological functioning, but also taps into emotional well-being and satisfaction, as well as physical pleasure conferred

from sexual activity. Finally the experience of forced sexual intercourse is studied in order to account for the requirement of sexual health to be free of coercion and violence.

By controlling for multiple covariates, the analyses also explore whether any predictive effects of sexual competence work independently of potential confounders. The results of these analyses will be informative for assessing the predictive validity of the measure of sexual competence at sexual debut, and also, the public health relevance of the experience of first sex.

Methods

Participants

Data from the Third National Study of Sexual Attitudes and Lifestyles (NATSAL-3) was analysed. NATSAL-3 is a stratified probability sample survey of 15,163 men and women aged 16-74 and resident in Britain. Participants were interviewed in 2010 - 2012 using a combination of face-to-face, computer-assisted personal interviews and computer-assisted self-interviews.

Measures

NATSAL-3 participants were asked about their age and experience of first sexual intercourse using show cards in the face-to-face component of the interview. Questions concerning the experience of first intercourse sought to measure whether partners were both equally willing to engage in sexual intercourse, whether the decision to have sex was autonomous (not due to factors external to the self, such as peer pressure or drunkenness), whether the respondent felt their first sexual encounter had happened at the 'right' time, and whether a reliable method of contraception had been used (contraceptive pill or condom). The sexual competence measure under focus in this study was retrospectively constructed using self-reports of the above four measures; a respondent is classified as sexually competent at first sex if the encounter was characterised by equal willingness of partners, autonomy of decision, that it happened at the right time, and a reliable method of contraception was used. Respondents who endorsed fewer than all four of these items were categorised as non-competent at first sex.

The STIs and forced sex outcomes were measured through single questions asking whether these events had ever occurred. Sexual (dys)function was measured using a questionnaire instrument that was developed and psychometrically validated for the measurement of sexual function in community surveys (Mitchell et al., 2012). Unplanned pregnancy was measured using the London Measure of Unplanned Pregnancy (LMUP) (Barrett et al., 2004). This psychometrically validated instrument is made up of six questions which aim to cover six thematic areas of the circumstances in which the respondent became pregnant in the last year: 1) expressed intentions; 2) desire for motherhood; 3) contraceptive use; 4) pre-conceptual preparations; 5) personal circumstances/timing; and 6) partner influences.

Sample restriction

For the purpose of this research, analysis has been restricted to those respondents aged 16-24 years at interview in order that the results are applicable to the contemporary young population of Britain who transitioned into sexual activity around or since the turn of the millennium, and therefore will have been subject to similar social and cultural norms surrounding first sex. This age group are also of particular public health relevance as they are more likely to be engaging in transient sexual relationships and are at greatest risk of negative sexual health outcomes, such as STIs (Public Health England, 2012).

Statistical analysis

Multivariate logistic regression was employed to determine whether sexual competence at sexual debut was independently associated with each indicator of sexual health (self-reported STIs, sexual dysfunction, unplanned pregnancy, and non-volitional sex). The aim of the analyses was to examine whether sexual competence at first sex was predictive of the selected sexual health outcomes, independently of whether sexual debut occurred before the age of 16, and other potential confounding factors. Statistical analysis was conducted using the Stata (Version 13) survey commands, in order to account for the weighting, clustering, and stratification of the survey data.

Results

Specific numerical results cannot presently be provided due to an embargo on the NATSAL-3 data until 1st December 2013. However a summary of findings is provided as follows:

Female respondents who were classified as not sexually competent at sexual debut were more likely to experience poor subsequent sexual health as indicated by: self-reported STIs, experiencing sexual dysfunction, having had an unplanned pregnancy in the last year, and the experience of sexual violence. These associations between sexual competence and each outcome of interest retained statistical significance even in the fully adjusted regression models including: first sex before 16, IMD quintile, ethnicity, educational level, parental social class, family structure in adolescence, source of sex education, communication with parents about sex, and forced sex before first consensual sex.

Possible explanations for the relationship observed among female respondents include:

- 1) The context and experience of sexual debut causally influences subsequent sexual behaviour, for example, through the establishment and/or maintenance of sexual scripts or schemas or 'habits'.
- 2) Unmeasured/unknown background factors account for the relationships observed.
- 3) Underlying personal-level factors account for the relationships observed.

Discussion

This study provides evidence for the utility of the NATSAL sexual competence at sexual debut measure in predicting subsequent sexual health, over and above the predictive effect of age at first sex, among young British females. Regardless of causal mechanisms explaining the associations identified, this measure can be used to identify females at heightened risk of poor sexual health.

There has been an emergence of research concerned with the importance of the *experience* and affective reaction to first sex and its potential importance in shaping the subsequent sexual trajectory. This study contributes to this emerging literature, and finds the measure of sexual competence, developed by Wellings et al (2001) which aims to provide a more nuanced account of first sex, to have an important predictive effect on indicators of subsequent sexual health among young females.

It seems unlikely that young people effectively have a blank sexual canvas, until their first sexual experience which then dictates their sexual trajectory from then on. We know from the vast body of literature that sexual behaviours are influenced by a huge number of factors at the societal, familial, individual level, with no single factor ever accounting for a great deal of the variation in sexual behaviour observed. It is possible, however, that the first sexual experience is one of the many influences at work in contributing to the typology of subsequent sex life.

Much of the sexual behaviour orientated intervention research, particularly sex and relationship education, has been concerned with delaying when young people become sexually active, however these efforts have been met with little or no success (Kirby et al., 2007, Wight et al., 2002, Kirby, 2001). Sexual competence at first sex may represent an alternative goal for interventions aiming to improve sexual health – potentially one that is also more agreeable to the young people targeted, in that the focus is shifted from problematisation of adolescent sexual intercourse per se, to a more accepting effort concerned with transitioning into sexual activity in a healthy and positive manner. If we accept that optimising the experience of first sex in itself is a worthy goal, then the chance that these efforts may also translate into better subsequent sexual health only furthers the argument for a shift in the educational and research paradigm concerned with improving young persons' sexual behaviour and health.

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