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Lifting the Curtain on the Conditions of Sexual Initiation among Youth in Ethiopia

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Abstract

Purpose—Deriving accurate estimates of the level of sexual coercion is challenging because of the stigma that is attached to the experience. This study examines the effectiveness of a nonverbal response card method to reduce social desirability bias in reports of the conditions of sexual initiation among youth in southwestern Ethiopia.

Methods—The conditions surrounding sexual initiation are examined using data from a pilot survey and a final survey of youth aged 13 to 24. Half of the respondents in each survey were randomly assigned to a nonverbal response card method for sensitive questions on sexual attitudes and behavior, and the other half of the respondents were assigned to a control group that provided verbal responses. Responses for the two groups to questions regarding the conditions of sexual initiation are compared.

Results—Respondents who used the nonverbal response card were more likely to report pressure from friends or a partner, having sex for money or another gain, and rape as conditions of sexual initiation than respondents who provided verbal responses. Among sexually experienced youth, 29.3% of respondents who used the card method reported some form of coercion during sexual initiation compared to 19.4% of respondents who gave verbal responses.

Conclusions—The nonverbal response card provides an effective method for reducing social desirability bias when soliciting responses to sensitive questions in the context of an interviewer-administered survey. The analysis also suggests that coerced sexual initiation is underreported by youth in interviewer-administered surveys that use conventional verbal responses.

Keywords

Sexual coercion; Initiation of sexual intercourse; Social desirability bias; Non-verbal response card

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Introduction

Early life events have consequences for subsequent behavioral, developmental, and health outcomes (1). Recent research identifies the importance of the conditions of sexual initiation for women's sexual health and subsequent relationship quality. Women who have a coerced first sexual intercourse are at higher risk of unwanted pregnancies, sexually transmitted infections, and subsequent sexual violence (2, 3). In contrast to women, relatively little is known about the conditions of first sex for men, and in particular men's experience as victims of sexual coercion and violence (for important exceptions, see 4, 5).¹

Deriving accurate population estimates of the level of sexual coercion is challenging because of the shame and stigma that is attached to the experience (6, 7). For both women and men being coerced into one's sexual initiation is often perceived as a sign of weakness, poor judgment, and a lack of control over one's self and one's immediate environment. The shame of being victimized is especially great for males. In most societies gendered scripts for sexual intercourse proscribe that males be assertive and the initiators of sexual relations. Females on the other hand should display some level of resistance to males' sexual advances outside of marriage or a committed relationship. Deviations from these scripts—an assertive female or a passive male—are interpreted as a sign of loose morals in the case of females and a lack of masculinity in the case of males.

Survey researchers refer to the tendency of respondents to underreport stigmatized attitudes and behaviors and over-report normative ones as social desirability bias. The presence of social desirability bias in reports of sensitive or stigmatized behavior in interviewer-administered surveys is well known (8–11). In this paper we examine the effectiveness of a non-verbal response card method to reduce social desirability bias in reports of the conditions of sexual initiation among youth in southwestern Ethiopia. We used the non-verbal response cards in two independent surveys of randomly sampled youth aged 13 to 24. In each survey one-half of the respondents were randomly assigned to the non-verbal response card method for sensitive questions on sexual attitudes and behavior, while the other half of the respondents were assigned to the conventional verbal response method. We compare the responses to questions on the conditions of sexual initiation for the two response methods to derive estimates of the direction and magnitude of the response bias in reports of coercion at the time of first sex. Our results reveal significant underreporting of coercion at sexual initiation, especially for males, and the underreporting by females of having pressured their partner to initiate sex.

Background

Some type of coercion occurs in a substantial fraction of sexual initiations in sub-Saharan Africa (12–16). The most common forms of sexual coercion appear to be pressure and insistence, with force and rape being less common (14, 17, 18). Most perpetrators of sexual coercion appear to be romantic partners (3, 19). Sexual coercion in sub-Saharan Africa is often depicted as a situation where vulnerable women are coerced into sexual activities with older men who have power over them (20, 21, 22). Recent research in sub-Saharan Africa has shown that coercion during sexual initiation has important consequences in terms of mental health, alcohol abuse, subsequent intimate partner violence, mistimed pregnancies, and sexually transmitted infections (3, 14, 15).

¹Rajani and colleagues (1994) and Lockhart (2002) describe the power dynamics behind sexual violence among young men living on the streets in Tanzania.

While coercion during young women's sexual initiation has received considerable attention, coercion during young men's sexual initiation has received less attention. Similarly, young men pressuring their partners for sexual intercourse receives more attention than does young women pressuring their partners. Although we expect both female and male youth to underreport the experience of sexual coercion, we expect the level of underreporting to be larger for males. The double standard in the norms regulating sexual behavior, and in particular the initiation of sexual intercourse, should lead to a greater reluctance among males to report feeling pressured or forced into sexual initiation. Likewise, we expect the common proscription against sexual assertiveness among females to lead to a greater reluctance among females to report pressuring their male partners to initiate sex.

A number of innovations in survey methods have been developed to reduce the level of social desirability bias in the context of interviewer administered survey questionnaires. These include the use of ballot boxes in which the respondents write the answers to sensitive questions on strips of paper and then place the strips in ballot boxes (23, 24); a random response technique in which the respondent answers yes or no to one of two randomly assigned questions, one of which was sensitive and the other which was not (25); and audio computer-assisted self-interviewing (26). Experimental tests of the effectiveness of many of these methods have yielded inconsistent results, and the methods tend to require either basic literacy or some familiarity with a computer – conditions which are often not uniformly met in many low-income contexts.

Methods

Data for this study come from the Gilgel Gibe Social and Sexual Relationship History Survey and a pilot survey conducted in 2006 by investigators from Brown University and Jimma University (a large regional university in southwestern Ethiopia). The surveys collected information on the formation of romantic relationships and the transition into sexual activity for youth aged 13–24 years. The samples for the pilot (202 respondents) and full (1269 respondents) surveys were independently drawn from the Gilgel Gibe Demographic Surveillance System (DSS), which incorporates rural communities and small urban centers surrounding the Gilgel Gibe Hydroelectric Dam, Jimma Zone. All respondents provided verbal consent, and verbal consent was obtained from the parent(s) of minors. Study procedures were approved by institutional research boards at Brown University and Jimma University.

The respondents in the pilot and full surveys were interviewed by same-sex interviewers at home in a location in the residence or residential compound where they were alone. The interviewers were fully conversant in the two dominant local languages (Amharic and Afan Oromo), and carried versions of the questionnaire in both languages. The questionnaires were translated from English into Amharic and Afan Oromo, independently back-translated into English, and then reviewed side-by-side with the bilingual (Amharic/Afan Oromo) interviewers. The questionnaire collected information on contact with health services, food insecurity, aspirations, attitudes regarding gender relations, HIV knowledge, and information about the last four romantic relationships. Sensitive questions regarding sexual behavior and knowledge were asked at the end of the interview (27). There were only minor differences in the versions of the questionnaires used in the pilot and full surveys, and none of these differences involve the questions and response methods that we analyze in this study.

A major concern of the investigators in launching the Gilgel Gibe Social and Sexual Relationship History Survey was that sensitive questions about sexual behaviors would be subject to considerable response bias in this largely rural, Muslim population. To address the

issue of reporting bias, the principal investigators developed a non-verbal response card that allows the respondent to non-verbally and confidentially communicate responses to questions read by the interviewer (27).

The response card is an $8\frac{1}{2} \times 11$ inch laminated sheet of heavy paper with a respondent side and an interviewer side. Each side is divided into 35 cells (five rows and seven columns) with a small hole punched through the center of each cell. On the respondent side of the card, the cells contain written and color coded responses (see Figure A1 in the Appendix). The numeric responses range from 0 to 25 (for the number of sexual partners and age at sexual initiation). The non-numeric responses are written in the two local languages and are color coded, green for “Yes,” red for “No” and blue for “Does not apply.” Each cell on the interviewer side of the card contains a unique three-digit number. The card is held by the respondent with the respondent side visible only to the respondent and interviewer side visible only to the interviewer. The respondent indicates his/her response to a question by inserting the point of a stick through the hole in the appropriate response cell. The interviewer records the three digit number in the cell on the interviewer side of the card through which the point of the stick is protruding. To ensure that the interviewer does not recognize a response based on the position of the response cell, ten response cards were prepared in which the position of the responses on each card varies (but the response set remains the same), and the three digit number assigned to each response is different. There are also multiple “Yes,” “No,” and “Does not apply” response cells on each card so that the respondent is not repeatedly use the same cell for “Yes” or “No” on any single card. The three-digit numeric codes are recoded to their corresponding response after the data have been entered into computer-readable data files. The three-digit numbers are unique across cards so that the interviewer does not have to record which card(s) the respondent used. The nonverbal response card does not require the respondent to be literate, although it does require basic numeracy. The low-tech and lightweight nature of the cards makes them ideal for use in rural areas in low-income countries (27).

The non-verbal response cards were randomly assigned to one-half of the youth in each of the samples in advance of interviewing. Table 1 presents the background characteristics for the respondents who were assigned to the verbal response method and for respondents who were assigned to the non-verbal response cards in the pilot and full surveys. Consistent with the random assignment of respondents to the response methods, the sample characteristics of the two groups in the pilot and full surveys are nearly identical across a range of background characteristics. For the portions of the questionnaire thought to be sensitive, the interviewers used the non-verbal response cards with youth who were assigned to the card (experimental) group, and they used the conventional verbal response method with youth who were assigned to the verbal (control) group. The sensitive portion of the questionnaire included 50 questions on sexual behavior, knowledge, and attitudes. Two questionnaires were prepared: one for youth assigned to the non-verbal response card method and one for youth assigned to the verbal method. The questionnaire for use with the non-verbal response cards included instructions that the interviewer read to the respondent on how to use the card for each question. There were no skip patterns in the non-verbal response card questionnaire because the interviewer did not know the respondents’ responses. Respondents were instructed to insert the point of a stick through any of the blue squares if a question did not apply to them. The questionnaire used with the verbal response method included skip patterns for questions that were not applicable. In all other respects, the two questionnaires were identical.

The questionnaire included a series of yes/no questions regarding the conditions of the respondents’ sexual initiation, including if the respondent had intercourse because of pressure from a partner, pressure from friends, to show love for the partner, for pleasure, because of marriage, because of being raped, and for money or to get a good grade or some

other gain. Respondents were also asked, “The first time you had sexual intercourse, which of the following was true...” “I put a lot of pressure on my partner” (yes/no) and “I put some pressure on my partner” (yes/no). Sexually inexperienced respondents assigned to the verbal response method were skipped out of the questions concerning the conditions of first intercourse and all respondents assigned to the non-verbal response cards were asked about their sexual initiation and reminded to point a blue square if they had never had sexual intercourse.

In this study we present the reasons for youth’s sexual initiation by response method and by sex. In comparing response patterns by response method we are able to estimate the extent to which youth conceal stigmatized conditions for sexual initiation and whether the level of response bias is different for males and females. We expect the differences by response method to be greatest for reasons involving some degree of coercion – being pressured or pressuring one’s partner, having sexual initiation for money or some other gain, and being raped. Traditional sexual mores in Ethiopia discourage premarital sex that does not transition into marriage, and especially multiple sexual partners among women (28). As sexual scripts define different behaviors for males and females in terms of who initiates sex and who influences the decision to have sex, we also expect that the effect of the response method will be different for males and females, with a larger response effect for male reports of being pressured or raped, and for female reports of pressuring a partner.

We pool data from the pilot and full surveys to increase our statistical power, and apply sampling weights in the pooled analysis to adjust for the over-sampling of urban youth. The response effects were very similar across the two surveys (Appendix Table 1a). The analysis was based on respondents who ever had sexual intercourse (201 verbal respondents and 205 card method respondents), which includes ever married respondents and sexually experienced never married respondents. Invalid responses, such as numeric responses to yes/no questions, were provided by 17 respondents. These 17 respondents were excluded from this analysis. In the pilot survey 20.4% of verbal respondents and 16.0% of card respondents were ever married, and in the full survey 23.9% of verbal respondents and 23.2% of card respondents were ever married (Table 1). Reports of sexual experience among never married respondents were low in the study area. In the pilot survey 15.9% of verbal respondents and 35.4% card respondents who were never married reported being sexually experienced; and in the full survey 3.7% of verbal respondents and 6.9% of card respondents who were never married reported being sexually experienced. The reported level of sexual experience is considerably higher in the pilot survey than in the full survey because of the urban location and the slightly older age profile of the pilot sample. The reported low levels of sexual experience among never married youth in the full survey are broadly consistent with reports for the Oromiya region in the 2005 Ethiopia Demographic and Health Survey (29), and reflect the predominantly rural composition of the full survey sample.²

Results

Table 2 presents the conditions of sexual initiation by response method. The most commonly reported conditions of first intercourse are non-coercive, such as marriage, pleasure, and to show love to a partner. Reports of feeling pressured or being raped at the time of sexual initiation, or having sexual initiation for some other gain, are less common. Also, relatively few youth in the study area reported that they put pressure on their first partner to have intercourse. As expected, the differences in reports of sexual initiation by response method are greatest for reasons related to pressure or force. Reports of pressure,

²The 2005 Ethiopia Demographic and Health Survey (DHS) found in the Oromiya region that 2.1 percent of never-married women aged 15–24 and 9 percent of never-married men aged 15–24 reported having sexual intercourse in the past 12 months (29).

force, or personal gain as conditions of sexual initiation are 1.7 to 3.7 times higher among respondents who used the non-verbal response card method compared to the verbal method. The effect of the response method is largest for having sex for money or some other gain. Close to 6% of sexually experienced youth who used the card method reported this as a reason for sexual initiation compared to close to 2% of youth who gave verbal responses. The second largest difference by response method is for rape. Approximately 9% of youth who used the card method reported being raped at the time of sexual initiation compared to 3.5% of youth who responded verbally. Overall, the reported level of experiencing some form of coercion at the time of sexual initiation was 60% higher among card respondents (28.6 %) compared to verbal respondents (17.9 %). Similarly, youth who used the card method were two times more likely than verbal respondents to report pressuring a partner to have sex.

In Table 3 we stratify the sample by sex to determine whether the conditions of sexual initiation and the patterns of response bias vary for females and males. Females tend to underreport, to a greater extent than males, being pressured by friends. Around 7% of female verbal respondents reported being pressured by friends compared to over 15% of card respondents. Females also are more likely than males to report having their sexual initiation for money or some other gain, and to underreport sexual initiation for this reason. Only 2% of female verbal respondents reported having sexual initiation for money or some other gain compared to 6% of card respondents. Males who used the response card report levels of rape that are approximately similar to those reported by female youth who used the card method. Two percent (one respondent) of male respondents who used the verbal method reported being raped compared to 9% of male card respondents. The response method effect is also large for male reports of being pressured by their partner: 16% of male verbal respondents reported being pressured by their partner compared to 30% of card respondents. This result is consistent with the greater expected stigma associated with being pressured or forced into sexual intercourse for males compared to females. Another striking result is the large response effect for female reports of putting pressure on a partner to have sex. Less than 3% of females using the verbal response method reported putting a lot or some pressure on their partner compared to 14% of respondents who used the card method. In contrast, among male respondents there is no evidence of a significant response effect for reports of putting pressure on a partner to have sex.

The female and male distributions of reasons/conditions of sexual initiation are not fully comparable because a smaller proportion of males compared to females were sexually experienced at the time of the survey. Consistent with the Ethiopian DHS, men in the study area tend to marry at considerably older ages than women (29).³ Approximately 81% (85.3% of verbal and 76.5% of card respondents) of the sexually experienced female respondents in the pooled sample reported getting married as a reason for sexual initiation compared to 52% (58.0% of verbal and 47.8% of card respondents) of sexually experienced male respondents.⁴ Premarital sex in Ethiopia tends to be closely linked to entry into a marital union (28). Along with the later age at first marriage, males in the study area tend to initiate sex at older ages than females. Sexually experienced males are therefore a more selective group in our study population than is the case with sexually experienced females. If we were to survey the same cohort of males at an age after which most were sexually experienced we would expect the distribution of reasons/conditions of first sex to be different. Nevertheless, the within sex group comparisons of reports by response method

³According to the 2005 Ethiopia DHS the median age at marriage in the Oromiya region is 18.7 years for women aged 20–24 and 24.4 years for men aged 25–59 (29).

⁴We interpret “because you were married” as a reason to have sex as meaning that entry into marriage marked the initiation of sexual activity.

provide evidence that coercion at time of sexual initiation is not an isolated phenomenon among either young women or men in the study area.

Discussion

Social desirability bias poses a serious problem in using interviewer-administered questionnaires to derive population estimates of stigmatized behaviors, knowledge, and attitudes. Most approaches to reducing social desirability bias involve some form of self-administration for the sensitive portion of the questionnaire, such as self-administered paper-and-pencil or internet surveys, or some form of computer assisted interviews. These innovations require basic literacy and/or familiarity with a computer keyboard or touch pad, which may limit their applicability in settings where illiteracy is high. We present the results of an experimental test of a non-verbal response card method designed to elicit responses to sensitive questions about sexual experience in a study of Ethiopian youth. Reporting of some form of coercion or violence at the time of sexual initiation is significantly higher among youth who used the non-verbal card method compared to youth who provided verbal responses. The response mode effect was greatest for having a sexual initiation for money or some other gain and for being raped, both of which are highly stigmatized conditions of sexual initiation. Consistent with hypothesized gendered scripts for sexual initiation, the magnitude of the response effect for different conditions of sexual initiation differed for females and males in predictable ways. Female respondents were more likely to report having put pressure on their partner and having sexual initiation for money or some other gain when they used the card method compared to the verbal method. Male respondents were more likely to report having been pressured or raped at the time of sexual initiation when they used the card method compared to the verbal method.

The non-verbal response card method reduces social desirability bias by providing greater confidentiality and privacy in the context of an interviewer-administered survey. The method does not require literacy, places minimum cognitive demands on the respondent, and is highly portable, low-cost, and adaptable to yes/no and low range numeric questions. Results for the effectiveness of the card method in reducing response bias in questions regarding nonmarital sex and condom knowledge have been published elsewhere (27). In this study we provide further evidence of the card's effectiveness in reducing response bias in reports of conditions of sexual initiation from two independent samples, one of 202 youth (70 sexually experienced) and a second of 1269 youth (182 sexually experienced).

Additionally, this study contributes to the growing evidence that coercion at the time of sexual initiation is experienced by many young men as well as young women. The sexually experienced youth in our sample is selected for early sex and therefore not representative of the eventual experience of sexual initiation of the cohort of youth studied. Nevertheless, one of the more intriguing findings of our study is that of the sexually experienced male respondents who used the card method, one-third reported coercive sexual initiation. Further, while the difference between males who used the card method and males who responded verbally was not statistically significant, close to one-out-of eleven who used the card reported being raped. These figures suggest that there is much to be learned about male sexual initiation.

Implications and Contribution

The non-verbal response card method reduces social desirability bias by providing greater confidentiality and privacy in the context of an interviewer-administered survey.

It does not require literacy, it places minimum cognitive demands on the respondent, and it is highly portable, low-cost, and adaptable to yes/no and low range numeric questions.

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(a) Side Facing Interviewer

963	238	631	842	479	420	292
938	105	669	351	691	675	888
539	634	988	410	192	881	561
467	889	912	632	359	745	433
743	317	705	898	590	986	871

(b) Side Facing Respondent

13	14	15	16	17	18	19
20	21	22	23	24	25	
ለዎ Eeyyee	የለሦ Lakki		0	1	2	3
4	5	6	7	8	9	
10	11	12			ለዎ Eeyyee	የለሦ Lakki

393	756	168	547	204	706	353
191	660	785	297	672	990	928
522	176	906	737	374	935	109
789	278	878	818	283	980	492
568	248	551	178	879	983	153

0	1	2	ለዎ Eeyyee	የለሦ Lakki	3	4
ለዎ Eeyyee	የለሦ Lakki		5	6	7	
	8	9	10	11	12	13
14	15	16	17	18	19	20
21		22	23	24	25	

Appendix Figure A1.**The Non-Verbal Response Card**

Note: ● represents a hole in the card for inserting the response stick; cells on the respondent side with ● alone are colored blue and are used for “does not apply” (e.g., age at first sex for respondents who have never had first sex); cells with the word “Eeyyee” and its Amharic equivalent are colored green and are used for “Yes”; cells with the word “Lakki” and its Amharic equivalent are colored red and are used for “No”; the valid range of numeric responses for the questions was 0–25 and was specific to the survey questionnaire for which the cards were tested and used.

Table 1

Sample Characteristics by Response Method, Gilgel Gibe Social and Sexual Relationship History Survey, Pilot Survey and Full Survey 2006, Youth Aged 13–24, Southwest Ethiopia.

Selected respondent characteristics	Pilot survey		Full survey	
	Verbal response %	Card response %	Verbal response %	Card response %
Male	57.3	53.2	51.1	51.5
Aged 13–16	41.7	40.4	52.4	52.6
17–20	34.0	41.5	30.1	29.5
21–24	24.3	18.1	17.6	17.9
Some school (1+ years)	78.4	85.1	64.3	65.3
Ever married	20.4	16.0	23.9	23.2
Never married, ever had sex	15.9	35.4 ***	3.7	6.9 **
Urban	100.0	100.0	23.7	25.5
Rural			76.3	74.5
Religion ^a	Not collected			
Muslim			88.6	88.4
Orthodox Christian			10.3	11.1
Other Christian			1.1	0.5
Ethnicity ^a	Not collected			
Oromo			88.2	90.6
Amhara			3.3	2.6
Yem			3.3	3.4
Other ethnicity			5.2	3.4
Number of observations ^I	(103)	(94)	(632)	(620)

Note:

^I Five of the 202 respondents in the pilot survey and 17 of the 1269 respondents in the full survey were dropped due to missing values.

 $p < 0.01$,

**
 $p < 0.05$.

Significance levels for Chi-square test of difference of proportions between verbal and card response methods.

Table 2

Reported Reasons/Conditions of First Sexual Intercourse by Response Method, Youth Aged 13–24 Who Have Ever Had Sex, Gilgel Gibe Social and Sexual Relationship History Survey 2006 (Pilot and Full Surveys Pooled), Southwest Ethiopia.

	Response Method			
	Verbal %	Card %	Card%/Verbal%	
The first time you had sexual intercourse, did you do it:				
Because you were married?	78.5	66.8	0.85	***
For pleasure?	38.8	37.2	0.96	
To show your partner you loved him/her?	33.0	30.7	0.93	
Because your friends pressured you?	8.5	14.6	1.72	**
Because your partner pressured you?	11.0	18.6	1.69	**
For money, to get a good grade in school or for some other gain?	1.5	5.5	3.67	**
Because you were raped?	3.5	8.5	2.43	**
Coercive first sex (pressured/for money/raped)	17.9	28.6	1.60	**
The first time you had sexual intercourse:				
I put a lot of pressure on my partner	4.0	8.3	2.08	*
I put some pressure on my partner	6.5	13.5	2.08	**
Number of cases	201	205		

Note:

 $p < 0.01$,

**
 $p < 0.05$,

*
 $p < 0.10$.

Significance levels for Chi-square test of difference of proportions between verbal and card response methods.

Table 3
Reported Reasons/Conditions of First Sexual Intercourse by Sex and Response Method, Youth Aged 13–24 Who Have Ever Had Sex, Gilgel Gibe Social and Sexual Relationship History Survey 2006 (Pilot and Full Surveys Pooled), Southwest Ethiopia.

Youth who have ever had sex	Females				Males			
	Verbal %	Card %	Card%/Verbal%		Verbal %	Card %	Card%/Verbal%	
The first time you had sexual intercourse, did you do it:								
Because you were married?	85.3	76.5	0.90		58.0	47.8	0.82	
For pleasure?	31.8	26.5	0.83		60.0	57.6	0.96	
To show your partner you love him/her?	25.8	25.0	0.97		55.1	41.8	0.76	
Because your friends pressured you?	6.6	15.2	2.30	**	14.0	13.6	0.97	
Because your partner pressured you?	9.9	12.9	1.30		16.0	29.9	1.87	*
For money, to get a good grade in School or for some other gain?	2.0	6.1	3.05	*	0.0	3.0		
Because you were raped?	4.6	8.3	1.80		2.0	9.1	4.55	
Coercive first sex (pressured/for money/ raped)	16.0	25.0	1.56	*	24.0	35.8	1.49	
The first time you had sexual intercourse:								
I put a lot of pressure on my partner	0.7	4.7	6.71	***	14.0	15.9	1.14	
I put some pressure on my partner	2.0	9.3	4.65	****	20.0	22.2	1.11	
Number of cases	146	136			55	69		

Note:

*** $p < 0.01$,

** $p < 0.05$,

* $p < 0.10$.

Significance levels for Chi-square test of difference of proportions between verbal and card response methods.