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Participant Acceptability of Questionnaires Impacts Sexual Victimization Prevalence Rates

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Abstract

Obtaining accurate prevalence rates of sexual violence is made difficult by discrepancies in self-report questionnaires. Thus, the current study sought to explore participants' perceptions of acceptability (i.e., perceived difficulty and preference) as a potential mechanism of discrepancy between different questionnaires. Participants were 673 college students who completed two frequently used sexual victimization questionnaires, the Sexual Experiences Survey-Short Form Victimization (SES-SFV) and the Post-Refusal Sexual Persistence Scales-Victimization (PRSPS-V). Participants then answered questions about each measure's perceived difficulty and their preference between the two. Participants found the PRSPS-V easier to understand and preferred it 2.5 to 1 over the SES-SFV. Preference was related to reporting; participants who preferred the PRSPS-V reported more instances of sexual victimization on the PRSPS-V by 9.8%. Our results indicate that acceptability impacts reported prevalence rates and is one mechanism of discrepancy between questionnaires. Thus, researchers may wish to consider acceptability when choosing sexual victimization questionnaires.

Keywords

measurement, sexual assault, rape, acceptability, sexual violence

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Sexual violence and rape are prevalent and pervasive violations experienced by people of all genders, races, ethnicities, and socioeconomic statuses that pose serious health and safety issues (Basile et al., 2022; Black et al., 2011). Sexual violence is a primary cause of many psychiatric conditions; especially posttraumatic stress disorder, depression, and substance use (Dworkin et al., 2017). According to the 2018 National Crime Victimization Survey (NCVS), there are at least 84 individual experiences of sexual violence every hour of every day in the United States (Bureau of Justice Statistics, 2019). Sexual violence is any sexual contact that occurs without consent, and rape is the most violent form, defined as any penetration no matter how slight by inability to consent, physical force, or threats of physical force (Basile et al., 2014). We conceptualize rape to include made-to-penetrate experiences regardless of gender. Yet, even when focusing on a specific population and similar measurement strategies, the rate of unwanted sexual contact among college women ranges from 1.8 to 24%, suggesting imprecision in the measurement of sexual victimization (Fedina et al., 2016). This lack of precision hinders the ability to accurately assess the scope of violence and the efficacy of interventions designed to prevent sexual violence and treat related problems. This paper aims to improve the precision of measurement of sexual victimization by exploring acceptability as a possible mechanism of discrepancies. Acceptability generally refers to participants' attitudes and preferences towards something (Sekhon et al., 2017). Thus, we explore questionnaire acceptability as a source of discrepancy between two frequently used measures, the Sexual Experiences Survey-Short Form Victimization (SES-SFV) and the Post-Refusal Sexual Persistence Scale-Victimization (PRSPS-V).

Comparison of the SES-SFV and PRSPS-V

Though the SES-SFV and the PRSPS-V both measure whether a respondent reports a history of sexual victimization, there are a number of differences between the questionnaires that allow for differential strengths and weaknesses we will briefly summarize (see Anderson & Delahanty, 2020 for a detailed comparison). Both are behavioral checklists providing descriptions of experiences that may or may not have happened to the respondent. Both capture a wide range of potential sexual experiences and tactics used to coercively obtain these experiences with multiple items. While both questionnaires assess the continuum of sexual victimization ranging from unwanted sexual contact to penetration, the greatest strength of the SES-SFV may be allowing users to delineate which behaviors meet legal definitions of rape. The PRSPS-V does not have this level of specificity because specific tactics are not linked to specific sexual outcomes. However, the PRSPS-V does have a strength in the simplicity of its structure: it is easier to read (Testa et al., 2015). The less graphic nature of the PRSPS-V items may be preferable for populations who are highly traumatized or sensitive to the topic of sexuality, for example, those who are culturally conservative (Hamby & Koss, 2003). For example items, see Table 1.

Regarding psychometric properties, there are additional differences between the questionnaires to consider. The convergent validity of the SES-SFV is more well studied than the PRSPS-V. Prior research using the SES-SFV has demonstrated correlations with measures of psychological distress and other forms of victimization among community residing young adults and men and women in college (rs ranging from .2 - .4, Anderson et al., 2018; Davis et al., 2014). PRSPS-V scores are correlated with compliant sexual behavior in women; in other words, consenting to unwanted sex in the absence of desire or outright coercion ($r = .32$, Katz & Tirone, 2008). Perhaps most importantly, using independent raters and a sample of college men and women, PRSPS-V scores were consistent with written descriptions of victimization experience 80% of the time (Struckman-Johnson et al., 2003). This type of construct validity data is not available for the SES-SFV. Comparisons of test-retest reliability within the same sample of MTurk workers

Table 1

Summary of Readability Statistics of the SES-SFV and the PRSPS-V

Description of Text	Source Questionnaire and Actual Text	Flesch-Kincaid Reading Grade Level
Consent	SES-SFV: without my consent.	5.2
	PRSPS-V: after you have indicated "no" to their sexual advance.	5.2
Sexual behavior	SES-SFV: —; seven different outcomes, such as "A man put his penis into my vagina, or someone inserted fingers or objects"	Range: 7.1-15.2 *M* = 10.87
	PRSPS-V: Since the age of 14, how many times has someone used any of the tactics on the list below to have sexual contact (kissed, fondled, genital touching, oral sex, anal sex, or intercourse) with you after you have indicated "no" to their sexual advance?	19.5
Tactics SES-SFV	—; five different tactics "a" - "e"	Range: 6.5-16.6 *M* = 10.96
	"a" verbal pressure	"a" – 16.6
	"b" verbal criticism	"b" – 15.0
	"c" alcohol/drug incapacitation	"c" – 6.5
	"d" threats of physical harm	"d" – 8.3
	"e" physical force	"e" – 8.4
PRSPS-V	—; 19 different tactics	Range: 0.0-11.2 *M* = 3.7
Shortest item SES-SFV item 2d (item 10)	Someone had oral sex with me or made me have oral sex with them without my consent by: Threatening to physically harm me or someone close to me.	12.6
PRSPS-V item 15	They tied you up.	0.0
Longest item SES-SFV item 1a (item 1)	Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent *(but did not attempt sexual penetration)* by: Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	28.7
PRSPS-V item 10	They were an adult at least 5 years older than you and you were under 18.	6.1
Randomly selected items (SES-SFV)	— ; SES-SFV items 1b (2), 3e (15), 6a (26), 6c (28)	Range: 16.8-26.0 *M* = 21.68
Entire document		
SES-SFV	—	9.3
PRSPS-V	—	12.3

Note. SES-SFV = Sexual Experiences Survey – Short Form Victimization, PRSPS-V = Post-Refusal Persistence Scale – Victimization. — indicates that the entirety of the text was too long to include in this table.

suggest that the SES-SFV and the PRSPS-V function very similarly, with the PRSPS-V performing slightly better for men than a modified SES (Anderson et al., 2021a). Thus, from the psychometric data available, the measures appear to operate similarly and purport to measure the same construct.

Discrepancies between the SES-SFV and the PRSPS-V

Researchers have reported broad discrepancies in cases identified by the SES-SFV and the PRSPS-V when administered in the same sample (Anderson & Delahanty, 2020; Strang et al., 2013; Testa et al., 2015) and in systematic reviews combining datasets (Anderson et al., 2021b). Because the questionnaires are not identical and considering naturally occurring error variance, perfect agreement in identifying cases would not be a reasonable expectation. However, the degree of discrepancy between the questionnaires seems to go beyond error variance. Considering shared affirmative responses within a sample – that is, agreement as to whether an individual respondent has a victimization hisory or not – the SES-SFV and the PSPS-V only agree 26.9-63.9% of the time (Anderson & Delahanty, 2020; Strang et al., 2013). This is startling and highly problematic – if researchers or clinicians are going to label an incident of behavior as rape, which can have serious legal implications – we should be confident in that assessment. Research in recent years has pinpointed some mechanisms of these documented discrepancies: divergence between the questionnaires in sexual behavior content, tactics content (Anderson & Delahanty, 2020; Strang et al., 2013), how tactics are described (Anderson et al., 2021c; Testa et al., 2014), and time periods assessed (Hilton et al., 1998). Controlling for these differences improves the degree of discrepancy (Anderson & Delahanty, 2020). Yet, unexplained discrepancies remain between the questionnaires. For example, Anderson et al., (2021c) controlled for content, item order, and item structure (using only tactic-first items), yet still found 20% of the sample was discrepant between a modified SES and the PRSPS-V even when accounting for gender of respondent. While the psychometric properties are similar, the number of cases identified is not the same suggesting additional mechanisms of discrepancy beyond content, item order, item structure, and gender. Thus, beginning to look beyond the questionnaire to mechanisms that may be specific to participant behavior is warranted.

Acceptability

One unexplored reason for measurement discrepancies is acceptability. Acceptability is a multi-component construct that generally refers to participant attitudes regarding the efficacy and aversiveness of a treatment or procedure (Sekhon et al., 2017). A primary way acceptability may impact violence research is in preferences for specific questionnaires or questionnaire design features. Participants may prefer certain questionnaires over others, finding them more acceptable: easier to understand, less emotionally distressing, et cetera. These factors may influence engagement and response. In the case of violence research, the most salient questionnaire features that may affect participant acceptability may be the readability and level of graphic language (Hamby & Koss, 2003). While acceptability has been widely incorporated into intervention research to understand why patients choose certain treatments over others (Sekhon et al., 2017), violence researchers have not examined how acceptability may impact the measurement of violence.

Acceptability: Difficulty and Preference

Acceptability, especially for violence related research, is an important dimension to consider (Hancock et al.,2020) and may affect the psychometric functioning of research instruments Acceptability, including participant preferences, is important to consider in and of itself for participant comfort and respect, especially for violence survivors whose consent and comfort have been violated (Campbell et al., 2019). Centering acceptability in violence research means exploring ways to make the research as minimally invasive

as possible, including prioritizing emotional comfort when possible. While this is consistent with existing ethics guidelines (The Belmont Report, 2010), taking a trauma-informed and violence-informed lens may result in different research procedures. For example, mild to moderate distress lowers cognitive ability in the moment (Vytal et al., 2012); so, if a research project includes likely upsetting content, ensuring that content is provided at the lowest reading level possible may improve acceptability. This is particularly true for those with existing victimization histories, whose cognitive functioning may already be taxed (Mark et al., 2019). Sometimes participants are uncomfortable with explicit terminology of sexual violence questionnaires (Hamby & Koss, 2003), which may impact participant behavior (e.g., skipping questions); thus yielding imprecise frequency estimates and a preference for less explicit questionnaires.

Acceptability: Readability

Because acceptability may impact participant behaviors, it may impact research findings. Research on participants' cognitive processing of sexual violence questionnaires suggests that the reading difficulty of items (e.g., readability) of questionnaires is related to reporting. In Strang and Peterson (2017), men reported that the verbal coercion items on the SES-SFV for perpetration (e.g., SES-SFP: Koss et al., 2007) were long and confusing. This resulted in discrepant findings between the perpetration forms of the SES-SFV and the PRSPS. Notably, participants did not report that the content was upsetting or too graphic. This finding, poor consistency for verbal coercion, is consistent with Anderson and Delahanty (2020), and Testa et al. (2015), which show that the largest discrepancies were for verbal coercion items. Although Strang & Peterson (2017) participants may also be motivated by impression management to not endorse items, Testa et al. (2015) reported that the Flesch-Kincaid reading level of the SES-SFP (11.3) is twice as complex as the perpetration version of the PRSPS (5.3), indicating readability cannot be ruled out.

The issue of readability of the SES-SFV is consistent with the larger psychometric literature on item characteristics. Longer items are more likely to be skipped and can trigger acquiescent response styles (Swain et al., 2008). Readability can impact comprehension and completion of survey items (Calderón et al., 2006). Confusion and readability issues can lead to disengagement and mis-response, including non-response (Fongwa et al., 2010). Given the modal value of any sexual violence item is typically zero, acquiescent response styles (e.g., responding zero because of disengagement from poor readability) would then decrease prevalence rates and increase discrepancies if there were differences between questionnaires in readability. Thus, the readability of items may impact acceptability and affect the psychometric properties, especially for populations with lower reading levels or low motivation. Validity could be affected in certain questionnaires being less strongly correlated with predictors, not because of true differences, but because of lower acceptability artificially lowering prevalence rates.

Current Study

This study aims to improve the precision measurement of sexual violence by exploring acceptability as a mechanism of measurement discrepancies. We chose to focus on the SES-SFV, given the widespread influence of the SES on the field, and its dominant use in the literature (Anderson et al., 2021; Fedina et al., 2018). We chose to compare the SES-SFV to the PRSPS-V because of the balance of strengths and weaknesses of the measures compared to each other; where the PRSPS-V is brief, the SES-SFV is more specific. Further, we sought a mixed-gender sample: the PRSPS-V included both women and men during development and testing (Struckman-Johnson et al., 2003), whereas the SES was designed and developed primarily for women and revised later to include men (with modest success: Anderson & Delahanty, 2020; Anderson et al., 2018a). We used a modified PRSPS-V, consistent with past research (see Measures section), to control for discrepancies related to content. We operationalized acceptability as perceived difficulty, preference, and reading levels.

Hypotheses (H) and Research Questions (RQ): We hypothesized that participants would perceive the SES-SFV as more difficult to understand than the PRSPS-V (H1a) and that Flesch-Kincaid reading levels would be lower (easier to read) for the PRSPS-V (H1b), consistent with Testa et al. (2015). We hypothesized that participants would prefer the PRSPS-V given its simpler format (H2). We also hypothesized that participants would report more instances of victimization on the questionnaire they preferred due to increased attention and engagement (H3: Swain et al., 2008), and that perceived difficulty would be predictive of discrepancy between questionnaires (H4). Given that past research highlights gender differences in the functioning of sexual victimization questionnaires (Anderson & Delahanty, 2020; Anderson et al., 2018), we also explored gender differences in acceptability. Finally, given the large subsample of sexual minority students in this sample, prior research on the unique characteristics of victimization against sexual minority students (Martin-Storey et al., 2018), and research suggesting sexual minority students may respond differently to some sexual victimization items (Anderson et al., 2017), we also explored sexuality related differences in acceptability.

Method

Participants

Participants were 673 college students (Mage = 19.51, SD = 3.58); 54.5% identified as women, 44.3% as men, and 1.1% as transgender and other gender identities (counted separately from the men and women groups). Most participants reported a heterosexual sexual identity (85.6%), 5.6% were bisexual, 4.9% gay, and 1.5% queer. Some participants selected other (n = 31) as their sexual identity and provided labels. A few were re-classified as heterosexual on the basis of these labels (e.g., "straight"). Participants were mostly White (85.6%), African American (9.4%), Asian American (3.7%), and Native American (1.0%). A small portion of the participants identified as Hispanic or Latinx (3.7%). The average income of participants' families was $60,000-79,999 a year. This study represents a secondary data analysis. The parent study was designed to examine content discrepancies and validity in sexual victimization questionnaires (Anderson & Delahanty, 2020; Anderson et al., 2021).

Measures

The Sexual Experiences Survey – Short Form Victimization (SES-SFV or SES-SFV: Koss et al. 2007). The SES-SFV consists of compound, behaviorally-specific items that each begin with a description of a sexual behavior followed by five possible tactic types (verbal pressure, verbal criticism, substance use, threats of physical force, physical force) that were used to coerce the respondent. There are 25-35 items on the SES-SFV depending on the respondent's gender (people with vaginas complete more items) by crossing each sexual behavior phrase (5-7 stems) with each tactic description (5 sub-stems). With college women, evidence of validity was demonstrated via correlations with trauma symptoms; test-retest reliability estimates of 70% agreement were found for the category of victimization (Johnson et al., 2017). With college men, validity has been documented via correlations with a measure of intimate partner victimization; test-retest reliability estimates of 80% agreement were found when scored dichotomously (Anderson et al., 2018b). Table 1 displays example items and item components.

The Post-Refusal Sexual Persistence Scale (PRSPS-V: Struckman-Johnson et al., 2003). The PRSPS-V consists of 19 items that assess five tactic types: enticement, verbal coercion, misuse of authority, alcohol/drugs, and physical force. The PRSPS-V first defines sexual contact in introductory instructions as "genital touching, oral sex, or intercourse" and then gives a list of 19 tactics as items such as "gave you alcohol or drugs to get you high." There is good evidence of the validity of the PRSPS-V in women via correlations with symptom and personality assessments (Struckman-Johnson et al., 2019). A recent paper

suggested adequate one- week test-retest reliability with percent agreement ranging from 81.0 – 85.3% and kappa estimates of .59 - .7; these estimates were stronger for women than men (Anderson et al., 2021). We made some slight modifications to the PRSPS-V to reduce content discrepancies. We revised the introductory text to make the definition of sexual contact broader, made items more gender-neutral, and used "since age 14" as the time frame to match the SES-SFV. We also added one item for a total of 20, "they physically forced you to touch them," consistent with French et al., (2015). Table 1 displays example items and components.

Scoring. The SES-SFV and PRSPS-V can be scored in a variety of ways. We used two different types of scoring for this study: dichotomous and continuous. Dichotomous scores were computed such that participants who responded "yes" to any item on either questionnaire were coded as having a history of sexual victimization. We also computed continuous scores such that endorsement of any item on the SES-SFV or PRSPS-V was coded as a "1" and then summed. These continuous scores were converted to z-scores which were then subtracted (SES z score – PRSPS z score) to create a standardized discrepancy index score.

Perceived difficulty. To assess overall questionnaire difficulty, at the end of each victimization questionnaire, participants were asked, "How difficult was it to understand this questionnaire? By difficult, we mean difficult to understand, not emotionally difficult." This item was rated on a visual analog scale from 0 (extremely easy) to 10 (extremely difficult).

Readability. The Flesch-Kincaid Reading Grade Level was computed using the calculator embedded in Microsoft Word to assess readability. Flesch-Kincaid Reading Grade Levels are determined by calculating the average sentence length and average number of syllables per word multiplied by a weighting factor for word length (Kincaid et al., 1975). We computed Flesch-Kincaid Grade Level scores for each full SES-SFV and PRSPS-V item, as well as individual sexual behavior and coercion stems and their combinations. When we tested a partial sentence or clause, we put a period at the end to overcome the Microsoft Word error detection algorithm that will not calculate readability statistics on phrases or clauses. Calculated reading levels are presented in Table 1.

Preference. After completing both the SES-SFV and the PRSPS-V, participants were immediately presented with the preference item. Participants were instructed, "Please think back to the two questionnaires you just completed. They asked you about similar experiences but in two different ways. Did you find one easier or more preferable than the other? Please look at the picture below if you need to jog your memory. Which do you prefer, Option A or Option B?" Below, a graphic was displayed that presented two items labeled Option A (on the left side of the screen), which were the first five items from the PRSPS-V, and Option B (on the right side of the screen), the first page of the SES-SFV. The remaining number of items was also noted.

Procedures

Data were collected between September and December 2017 in the Sona experiment management system at a large, Great Lakes region, Midwestern American university, and questionnaires were administered anonymously through Qualtrics. Data were collected for one semester to ensure a large sample of men and women.

After completing informed consent, participants completed the SES-SFV and PRSPS-V in randomized order. Participants also completed questionnaires on rape empathy and perceptions of consent. Data on rape patterns of rape empathy in relation to demographic characteristics were reported here: Anderson et al., 2021. The consent experiment was analyzed in an undergraduate thesis presentation presented here: Pallo, 2018. Thus, there is some overlap with prior papers that focused on describing discrepancies. The current paper has a unique focus on acceptability as an explanation for why those discrepancies exist. Data collection was supervised by the Kent State University Institutional Review Board.

Power Analysis

Because this was a secondary data analysis, we were not in control of the parent study sample size decisions. However, we conducted power analyses prior to analyses to determine feasibility. According to an a priori power analysis conducted in G-Power, we had a sufficient sample size to detect most small effects (dz = .15, suggested n = 491 for Power = .91) for paired samples t-tests.

Participants retained in this study were 673 college students who completed at least one item on either victimization questionnaire. Missing data for SES-SFV and PRSPS-V items was minimal (<5% per item). Kurtosis was 16.24 for SES-SFV continuous scores, and thus Spearman's rank (rho) correlations are reported for analyses using this variable.

Data Cleaning

Missing data was higher for the acceptability questions; 162 participants skipped the difficulty item for the SES-SFV, and 181 participants skipped this item for the PRSPS-V; the proportions of missing items between the questionnaires was not different, $\chi 2(1) = 1.41$, $p = .235$, Cohen's d (n = 181), = .177. We next compared the characteristics of participants who skipped difficulty items vs. those who did not: no differences were found between completers and non-completers on age, sexual identity, race, or ethnicity. Skippers were more likely to identify as women, $\chi 2\ (3, 673) > 8.30$, $p < .05$. Participants who reported more frequent victimization were more likely to complete the difficulty items, $t(671) \geq -2.00$, $p < .05$. Specific to completion of the SES-SFV difficulty item, participants with $100,000+ income level were more likely to skip it.

We used a visual analog slider via Qualtrics to collect the difficulty ratings. However, in Qualtrics, if participants do not click the slider, the response is automatically coded as missing. We suspect that because the slider was set to start at zero, some participants who were coded as missing thought they were reporting a zero response. Below we present our primary analyses excluding missing cases and at the end of each section, report findings assuming zeros as missing difficulty ratings.

Results

Hypothesis 1: Acceptability; Perceived Difficulty by Questionnaire (H1a), Gender, and Sexual Identity Differences

The mean difficulty rating for the SES-SFV was 2.72 out of 10 (SD = 2.34, n = 511), and the mean difficulty rating for the PRSPS-V was 2.14 out of 10 (SD = 2.18, n = 492). A paired samples t-test indicated difference, $t(431) = 6.21$, $p <. 001$, of moderately small effect size dz = .30; the ratings were also correlated, $r(432) = .64$, $p <.001$. We repeated these analyses by gender (men vs. women) and sexual identity (majority vs. minority). The difference in difficulty ratings favoring the PRSPS-V remained for women, $t(206) = 7.25$, $p <.001$, $d = .44$, heterosexual people, $t(371) = 5.67$, $p < .001$, $d = .26$, and sexual minority individuals, $t(59) = 2.51$, $p = .015$, $d = .25$, but not men, $t(218) = 1.83$, $p = .069$, $d = .10$. We repeated this analysis controlling for order of questionnaire administration. For participants who received the PRSPS-V first, there was a small effect of rating the PRSPS-V more highly (approximately .4 points), $t(1, 485.52) = 1.86$, Cohen's $d = .167$, $p = .063$; there was no effect of order on SES-SFV ratings, $t(1, 508) = 0.702$, Cohen's $d = .062$, $p = .483$.

Assuming missing difficulty ratings were zeros, there was no change in the overall pattern; the mean difficulty ratings were slightly smaller. The mean difficulty rating of the SES-SFV was 2.07 (SD = 2.35) and was 1.57 (SD 2.09) for the PRSPS-V; the effect size of this difference was dz = .26. There were some differences for specific groups in this analysis. The difference between questionnaires for sexual minority

individuals disappeared, t(96) = 1.65, p = .102, d = .17 while a difference for men emerged, t(297) = 2.34, p = .02, d = .14.

Perceived difficulty and victimization history. To examine the influence of sexual victimization history on difficulty ratings, we computed correlations between difficulty ratings and PRSPS-V and SES-SFV continuous scores. Participants who had more experiences of sexual victimization (and thus higher continuous scores) might find the questions more distressing and, therefore difficult (Edwards et al., 2009). SES-SFV difficulty ratings were correlated with SES scores, r(511) = .152, p = .001; but there was no relationship between difficulty ratings and PRSPS-V scores, r(492) = .075, p = .097.

Readability (H1b). To better document how various parts of the questionnaires may be more or less complex, we calculated reading levels for the overall questionnaire as well as specific sub-parts. Given limited space, we report the longest item, the shortest item, and four randomly selected items for each questionnaire in Table 1 to give a sense of the range of the data. Full data tables including the full text of every item tested are available on osf.io:
https://osf.io/umry8/?view_only=cb01bd294d1b4b08af58e60aaf7b3829

SES-SFV items were numerically more complex in reading levels, with two exceptions. For sexual behavior, the SES-SFV item stems were less complex than the single, comprehensive, PRSPS-V description (SES-SFV items: 7.1 - 15.2/PRSPS-V: 19.5). For the operationalization of consent, the measures were equal (5.2). Otherwise, the difference in the degree of difficulty between SES-SFV and PRSPS-V items was large; for example, the mean reading grade level for the SES-SFV tactic items was 10.96 while it was 3.7 for the PRSPS-V.

Hypothesis 2: Preference

Participants reported a moderately strong preference for the PRSPS-V over the SES-SFV; 72.8% of participants reported preferring the PRSPS-V over the SES-SFV while 26.9% of participants reported preferring the SES-SFV over the PRSPS-V. We repeated this analysis controlling for order of questionnaire administration; whether participants received the PRSPS-V or the SES-SFV first, preference was strong for the PRSPS-V although it was slightly stronger for participants who received the PRSPS-V first (preference of 69.8 vs 76.6%, χ 2 (1) = 3.935, p = .047, Phi = .077 (small effect size). Further analysis of this effect by gender suggests that there was no order of administration effect for women, but there was for men, χ 2 (1) = 4.76, p = .029, Phi = .138, with men who received the PRSPS-V first favoring it even slightly more.

We repeated this analysis for gender x sexual orientation groups (sexual minority women, heterosexual women, sexual minority men, heterosexual men); results were the same and did not vary statistically by group, χ 2(3) = 5.88, p = .118. Heterosexual women preferred the SES-SFV over the SES-SFV 77.6% to 22.4%, heterosexual men 69.7% to 30.3%, sexual minority women, 71.1% to 28.9%, and sexual minority men 66.7% to 33.3%.

We conducted a logistic regression predicting questionnaire preference while controlling for difficulty ratings to account for how ease and difficulty were potentially conflated in the wording of our preference item. Difficulty ratings were converted to z-scores in order to account for scoring discrepancies between the PRSPS-V and the SES-SFV (i.e., standardize the scores). Z-score difficulty ratings for the PRSPS-V (Exp(B) = 1.101, p = .496) and the SES-SFV (Exp(B) = .909, p = .501) were not predictors of preference, Nagelkerke R2 = .002, suggesting that preference was not likely driven by perceptions of ease.

Hypothesis 3: Relationship between Preference and Prevalence Rate

We next assessed whether participant preference was related to reported prevalence rates. Results suggest prevalence rate varied with preference for the PRSPS-V, $\chi 2(3) = 5.13$, p = .024, phi = .087 (small effect size), but not the SES-SFV, $\chi 2(3) = 0.84$, p = .359. Specifically, the prevalence rate of sexual victimization for the PRSPS-V preference group was 51.8% on the PRSPS-V vs. 42.0% on the PRSPS-V for the SES-SFV preference group. Notably, this difference of 9.8% is numerically similar to the 10.6% difference in overall prevalence rates.

Hypothesis 4: Perceived Difficulty and Discrepancy

We computed a regression model wherein difficulty ratings were used to predict the discrepancy index z-score while controlling for order of administration. Difficulty scores for both questionnaires were predictive of the discrepancy index score, p = .003, R2 = .032, effect size f2 = .033 (very small). We repeated this analysis assuming zeros for missing data; in this analysis the SES-SFV difficulty scores remained a predictor while PRSPS-V scores did not, see Table 2 suggesting that any effect of difficulty ratings on discrepancy is very small.

Table 2

Regression Analysis Summary of Difficulty Ratings Predicting Discrepancy between the Questionnaires

Model	Predictor	*B*	*SE B*	B	*t*	*p*	*F*, *p* for model	R^2
1. No data replacement	SES-SFV	-.076	.021	-.223	-3.591	<.001	*F*(3, 427) = 4.745, *p* = .003	.032
	PRSPS-V	.043	.023	.118	1.8880	.061		
2. Assuming zeros	SES-SFV	-.039	.016	-.121	-2.394	.009	*F* (2, 670) = 3.430, *p* = .033	.014
	PRSPS-V	.024	.019	.065	1.276	.093		

Note. SES-SFV = Sexual Experiences Survey – Short Form Victimization, PRSPS-V = Post-Refusal Sexual Persistence Scale-Victimization.

Discussion

A growing literature documents the discrepancies in cases identified between various measures of sexual violence. One possible yet previously unexplored explanation for discrepancy is the acceptability of the questionnaires, operationalized in this study as perceived difficulty, preference, and readability. Our findings suggest that acceptability impacts how sexual victimization questionnaires function particularly preference; reported prevalence rates were higher on the preferred questionnaire (the PRSPS-V).

Acceptability Findings

Our participants found both questionnaires easy to understand (H1a), but there was a small, consistent difference in perceived difficulty ratings such that participants found the PRSPS-V easier to understand (H1b) and preferred it (H2). Preference for the PRSPS-V persisted, even when controlling for difficulty ratings. Difficulty and preference ratings were generally consistent across gender and sexual majority vs. minority groups. Although the effect sizes for ease and preference ratings were small, they had a significant practical impact.

Participants who preferred the PRSPS-V reported higher prevalence rates on that questionnaire (H3). This is quite surprising at the macro level, that participant questionnaire preference could influence reported prevalence rates of sexual violence – and by 9.8%. Yet, at the individual level, we speculate that a participant may have felt annoyed with the effort required to understand a complex item or preferred a simpler questionnaire; this may have led them to an acquiescent response style in the moment. This suggests that for those who did not prefer the SES-SFV, their engagement and associated reporting of sexual victimization decreased. Another dimension of acceptability was also reflected in regression analyses; SES-SFV difficulty ratings predicted discrepancy between the two questionnaires, although this effect was very small (H4).

Future Directions and Implications on Acceptability

In either case, considering these acceptability findings could be useful in optimizing participant engagement for certain studies and populations. When a population is more traumatized, they will need to pay more close attention to the items to respond accurately. In the case of the SES-SFV and PRSPS-V, that means more cognitive effort is required to complete the SES-SFV. Future research might investigate what is the minimum level of complexity needed and explore how simplified versions of the SES-SFV function to make the SES-SFV accessible to more audiences. For example, it may not always be necessary to separately assess oral, anal, and vaginal penetration as separate items. Indeed, some research has combined these items with no obvious negative impacts (Anderson et al., 2021). Further, these findings may be helpful in considering statistical power. The general population base rate of sexual victimization is around 25%; thus, if the population in question has questionnaire preferences, the base rate could be increased by almost 40% by including a more preferred questionnaire. Future research further exploring emotional difficulty of questionnaires and questionnaire preference by population and participant characteristics may be helpful.

Future Directions and Implications for Readability

Our analysis suggests the verbal coercion items on the SES-SFV are at a minimum grade level of 15.0 in complexity (i.e., college grade level). On average the SES-SFV items were 2-4x more complex than the PRSPS-V items; in one instance, a SES-SFV item was 12x more complex (oral sex coerced by physical force). These differences in readability are important when considering dissemination of the SES-SFV to different populations. The SES has been used in many different populations, including teens and incarcerated individuals. An important research question for future studies is whether difficulty ratings and preference vary in populations which do not read at a college level; presumably in this college sample most participants did not struggle to comprehend the SES-SFV items.

Limitations

We did not counterbalance the visual presentation of the SES-SFV/PRSPS-V items in our preference question. However, the cognitive decision-making literature indicates that it is more likely that participant preference would have been biased toward the SES-SFV due to the negative valence of the overall question (Englund & Halström, 2012). Our preference item conflated preference and ease in its wording, "did you find one easier or more preferable than the other?" Worded in this manner, we cannot know if participants are reporting that they prefer the PRSPS-V or if they find it easier. It could be that our findings reflect a combination of emotional distress and preference related to readability, especially for the SES-SFV wherein the number of items endorsed was correlated (though weakly) with difficulty ratings. Our logistic regression analysis did not support the idea that difficulty ratings are predictive of preference, suggesting the inelegantly worded preference item did reflect true preference to some degree. Finally, although we

used modified questionnaires in this study, we did not change the overall structure of the PRSPS-V or the SES-SFV, suggesting our findings would likely generalize. Indeed, we speculate that preference and difficulty ratings might be even more negatively valanced in non-college populations which may not read at college levels and are less accustomed to survey research.

Conclusion

This study was one of the first to assess the acceptability of sexual victimization questionnaires and the first to link differences in acceptability to reported prevalence rates and measurement discrepancies. Our results suggest college students, including men, women, and sexual minorities, find both the SES-SFV and the PRSPS-V acceptable. We also found that acceptability has a small but measurable impact on findings, with participants reporting more victimization on the questionnaire they preferred. Our findings suggest that acceptability is an important metric for sexual violence researchers and practitioners to consider.

Disclosure of Interest

Authors have no conflicts to report.

Ethical Standards and Informed Consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Delcaration of 1975 as revised in 2000. Informed consent was obtained from all participants included in the study.

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