Young Adult Respondent Experiences of Disclosing Self-Injury, Suicide-Related Behavior, and Psychological Distress in a Web-Based Survey

Janis Whitlock [a] [b] , Celeste Pietrusza [a] & Amanda Purington [a]

[a] Bronfenbrenner Center for Translational Research, Cornell University, Ithaca, New York, USA

[b] Department of Human Development, Cornell University, Ithaca, New York, USA

Published online: 06 Feb 2013.

PLEASE SCROLL DOWN FOR ARTICLE

Routledge
Taylor & Francis Group

Young Adult Respondent Experiences of Disclosing Self-Injury, Suicide-Related Behavior, and Psychological Distress in a Web-Based Survey

Janis Whitlock, Celeste Pietrusza, and Amanda Purington

The objective of this study was to examine the impact of questions regarding self-injury, suicide, and psychological distress in a web-based survey on respondents, particularly those with relevant personal histories. Drawn from a random 8-college sample, 14,372 students completed the survey. Adjusted odds ratios were used to model the likelihood of responses based on respondent characteristics. The constant comparative method identified salient themes in qualitative data. Few individuals (2.7%) reported negative survey experiences. Individuals with relevant personal experience reported greater discomfort with the survey yet were also significantly more likely to report that it caused them to think more deeply about their lives. Surveys may be beneficial in promoting self-reflection, particularly among individuals with relevant experience.

Keywords   ethics, mental health, NSSI, suicide, survey research

INTRODUCTION

Concern about elevated and potentially increasing rates of mental health issues in young adult populations has intensified the efforts of researchers and university administrations to better understand, detect, and treat mental health issues in populations of young people (American College Health Association, 2007; Gallagher, 2006). As a result, surveys assessing sensitive topics (such as mental health history and current status) are increasingly common, particularly on college campuses. Although extant research suggests little, if any, risk to participants as a result of answering these "sensitive" survey questions, studies of respondent experience, perception, and impact of their participation in these surveys are rare in college populations and among individuals with relevant life experience (Lakeman & FitzGerald, 2009a, 2009b; Prinstein, 2008).

This is particularly salient in the era of web-based research since researchers cannot control the conditions under which respondents complete surveys and are often most interested in populations with

experience in at least one of the mental health areas assessed on these surveys, such as suicide thoughts/suicide behaviors (ST/SB), non-suicidal self-injury (NSSI), or other global forms of psychological distress. Since onset of mental illness is most common during late adolescence and young adulthood (Blanco, Okuda, Wright et al., 2008; Kessler, Berglund, Demler et al., 2005) and these developmental periods heighten risk for other indicators of mental distress (Eisenberg, Gollust, Golberstein et al., 2007; Kochanek & Smith, 2004), understanding respondent experiences of surveys containing questions regarding mental health status is imperative.

Extant studies of the effects of asking questions regarding these topics in secondary school and adult populations suggest that negative effects of research participation are minimal and, when present, short-lived and without long-term effects (Blecker-Blease & Freyd, 2006). Only small percentages of an adolescent sample reported feeling upset by a survey assessing ST/SB, though those adolescents with a history of suicide-related behavior were more likely to feel upset (Langhinrichsen-Rohling, Arata, O'Brien et al., 2006). However, even among individuals reporting a history of NSSI, suicide-related behavior, and/or global psychological distress (henceforth referred to as those with a "history of psychological distress" or HPD), levels of negative arousal documented were relatively low and largely limited to short term discomfort (Langhinrichsen-Rohling, Arata, O'Brien et al., 2006).

Some studies suggest salutary effects of research participation even when the content is emotionally evocative or difficult, although virtually all of these studies have been conducted with adults. Other research with bereaved interview participants found that though some described the study as being stressful or upsetting, they nonetheless welcomed the opportunity to express their grief as well as to gain insight into

their loss (Cook & Bosley, 1995). In another study, victims of interpersonal violence interviewed about their experiences believed that the survey contained questions they felt were important and ought to be asked (Black, Kresnow, Simon et al., 2006). Other studies with at-risk individuals and those suffering from psychiatric illnesses have shown that research participation may, for some participants, have a mild therapeutic effect (Gould, Marrocco, Kleinman et al., 2005; Reynolds, Lindenboim, Comtois et al., 2006; Taylor, Awenat, Gooding et al., 2010). In one study, individuals with major depressive disorder reported a decrease in suicidal ideation thoughts after participating (Smith, Poindexter, & Cukrowicz, 2010).

Few of these studies have been conducted in young adult or college populations, though this developmental phase is one of the highest risk periods for mental health. Moreover, little is known about whether respondent experiences of being upset by survey questions may also include more salutary effects such as heightened awareness or self-reflectiveness, particularly in a population where many respondents may be actively struggling with the specific topics of interest such as ST/SB, NSSI, and current psychological distress. Researchers and ethics committee review members may be conservative when approving research proposals due to concerns about their potentially iatrogenic effects on participants (Lakeman & FitzGerald, 2009a, 2009b).

The current study augments existing research by examining participant experiences of a web-based anonymous survey, assessing a wide variety of mental health and wellbeing measures, including ST/SB, NSSI, and psychological distress. The NSSI and suicide-related items were particularly detailed since this study was intended to investigate NSSI and the relationship between NSSI and suicide-related behavior in depth. As a result, individuals with

current or past suicide-related behavior or NSSI were exposed to a high number and complex set of follow-up questions about their NSSI and suicide-related behaviors.

METHODS

Quantitative data were drawn from two closing questions from an eight-college random sample *Survey of Student Well-Being* (SSWB, $n = 14,372$) which included questions about suicide-related behavior, NSSI, global psychological distress, and a variety of co-morbid risk and protective factors. The *SSWB* included four items assessing respondent perceptions of survey effects. A total of 13,155 participants responded to the following close-ended items: "Answering some of the questions on this survey caused me to feel upset" and "Answering some of the questions on this survey caused me to think more deeply about my life." Respondents ranked their answers on a 5-point Likert-type scale. Both questions were followed by an open-ended item inviting the respondent to elaborate on his or her response.

Respondents were categorized with respect to psychological distress in the past month, self-injury history, and history of suicide-related behavior. NSSI was assessed using the Non-Suicidal Self-Injury Assessment Tool (NSSI-AT; Whitlock & Purington, 2011), suicide was assessed using a scale developed by Kessler and colleagues (Kessler, Berglund, Borges et al., 2005), and psychological distress in the past 30 days was assessed using the K-6 (Furukawa, Kessler, Slade et al., 2003). Individuals indicating "yes" to the suicide and NSSI screening questions were routed to a series of more in-depth items regarding the nature and timing of each behavior.

Of the total sample ($n = 14,372$), 15.3% ($n = 2,074$) indicated engaging in NSSI at some point in their lives. Of the whole sample, 13.2% ($n = 1,900$) indicated having seriously considered or attempted suicide at some point in their lives. Over two-thirds of all respondents (67.7%; $n = 9,730$) were categorized as evidencing "low" psychological distress, 26.1% ($n = 3,751$) as evidencing "moderate" psychological distress and 6.2% ($n = 891$) as evidencing "high" psychological distress in the last 30 days.

Sex, race/ethnicity, and sexual orientation were included as demographic controls in analyses. The sample was 42.8% female and 56.9% male. Following the U.S. census codes, race/ethnicity categories included: non-Hispanic black, non-Hispanic white, and Hispanic. An Asian/Asian-American category was included to reflect the significant number of Asian/Asian-Americans in each university. The "other" category included American Indian/Alaskan Native, Middle Eastern or East Indian, Native Hawaiian or Pacific Islander, Bi-racial/ethnic or Multi-racial/ethnic. Racial/ethnic distribution in this study was: 64.8% Caucasian, 3.7% African-American, 4.8% Hispanic, 14.5% Asian, and 11.3% other. Responses to the sexual orientation question, assessed by an item which queried sexual attraction response options, were collapsed to create a sexual orientation variable which reflected the following categories: heterosexual (77.5%), mostly heterosexual (14.6%), bisexual (4.3%), mostly gay/lesbian (1.4%), and gay/lesbian (2.3%). Respondents included in the current analyses ($n = 13,155$) did not differ significantly from those in the full dataset on any demographic characteristic used in these analyses.

Qualitative data were drawn from the open-ended items in which respondents were invited to expand upon their self-reported levels of "upset" ("answering questions on this survey caused me to feel upset") and "depth of thinking" ("answering questions on this survey caused me to think more deeply about my life") in

response to completing the survey. A total of 1,345 respondents provided qualitative detail in response to the question about feeling upset about completing the survey as did 2,291 to the item asking if the survey caused them to think more deeply about their lives. From each group, 250 responses were randomly chosen for coding of valence: positive, negative, or neutral. From the total of 500 responses chosen at random, 61 responses were excluded for containing extraneous or irrelevant data (e.g., random keystrokes, question marks, or responses not associated with the survey prompt). In total, 439 unique responses to the open-ended qualitative responses were coded.

Analyses

Quantitative data were analyzed using SPSS version 17 (SPSS Inc., Chicago, Ill.). Descriptive analyses as well as ANOVAs were conducted to assess differences in survey reaction responses by participant characteristics. Binary logistic regression with adjusted odds ratios (AORs) and 95% confidence intervals (CIs) was used to model the likelihood of different participant responses based on demographic characteristics and mental health history.

Qualitative data were analyzed by using the constant comparative method (Glaser & Strauss, 1967) to identify salient themes. Since qualitative responses to the two variables elicited similar comments, they were merged for coding purposes. Two independent coders systematically reviewed responses and, once the initial set of observations had been reviewed, key emergent themes discussed, and coding scheme determined, thematically grouped clusters were identified. Inter-rater reliability for primary code assignments using Kappa reliability statistics was .7, indicating acceptable agreement. This resulted in six broad categories that were then reduced to three groups reflective of emotional valence:

positive (e.g., "taking this survey made me see how far I have come"), negative (e.g., "taking this survey will cause me to feel upset all day") or neutral (e.g., "taking this survey did not really affect me one way or the other"). Coding discrepancies were discussed between the two coders until consensus was reached.

RESULTS

Distribution of the two quantitative respondent reflection variables and ANOVA tests for differences by key demographics and mental health variables are shown in Table 1. Demographics and mental health history yielded statistically significant differences for each question analyzed here. In general, HPD ("history of psychological distress," which includes ST/SB, NSSI, and/or recent elevated psychological distress on the K-6) individuals reported greater discomfort with answering survey questions. However, they were also significantly more likely to report that they survey caused them to think more deeply about their lives than those without similar histories or distress. Overall, 25.8% ($n = 3,476$) of all respondents had a history of suicidal thoughts or actions, NSSI, or exhibited high psychological distress on the K-6.

To gain a more sophisticated understanding of respondent survey experience, responses to the two quantitative survey reflection questions were combined to create a new variable reflective of various response permutations. The categories and respondent distribution for all responses are presented in Figure 1.

The three most predominant response categories were "no effect" (33.6%), "positive experience" (29.9%), and "hard but thought-provoking" (13.1%). Only 2.7% of all respondents fell into the "negative experience" category. Binary logistic regression was used to assess the relationship between demographic characteristics and mental health status and three of the

TABLE 1. Distribution of the Two Respondent Reflection Variables and ANOVAs for Differences by Key Demographics and Mental Health Variables

Variables	Made me feel upset (1 = very true − 5 = very untrue)		Caused me to think more deeply about my life (1 = very untrue − 5 = very true)	
	Mean (SD)	F Statistic with p-value	Mean (SD)	F Statistic with p-value
Demographics				
Sex				
Male	4.19[a] (1.2)	48.3 (.000)	2.91[a] (1.3)	91.9 (.000)
Female	3.99[b] (1.2)		3.06[b] (1.2)	
Sexual orientation				
Heterosexual	4.14[a] (1.2)	33.7 (.000)	2.99 (1.2)	2.2 (.066)
Mostly heterosexual	3.87[b] (1.3)		2.04 (1.2)	
Bisexual	3.84[b] (1.3)		2.93 (1.3)	
Mostly gay/lesbian	3.62[b] (1.4)		3.14 (1.3)	
Gay/lesbian	4.01 (1.3)		3.08 (1.2)	
Race/Ethnicity				
White	4.10[a] (1.2)	4.04 (.003)	2.97[a] (1.2)	10.7 (.000)
African-American	4.03 (1.3)		3.31[b] (1.3)	
Hispanic	4.05 (1.3)	4.04 (.003)	3.06[a] (1.2)	10.7 (.000)
Asian	4.06 (1.2)		3.04[a] (1.2)	
Other	3.98[b] (1.3)		2.99[a] (1.3)	
Primary outcome variables				
History of suicide-related behavior				
No	4.15[a] (1.2)	112.2 (.000)	2.98[a] (1.2)	4.05 (.007)
Yes	3.60[b] (1.3)		3.09[b] (1.3)	
History of Non-suicidal self-injury				
No	4.17[a] (1.2)	385.5 (.000)	2.98[a] (1.2)	11.7 (.001)
Yes	3.58[b] (1.4)		3.08[b] (1.3)	
Psychological distress (K-6 score)				
Low (6–13)	4.28[a] (1.1)	62.6 (.000)	2.91[a] (1.2)	62.6 (.000)
Moderate (14–18)	3.75[b] (1.3)		3.15[b] (1.2)	
High (18–24)	3.21[b] (1.4)		.22[b] (1.3)	

Note. All models adjusted for sex, race/ethnicity, and sexual orientation.
[a]$p < .001$; [b]$p < .01$; [c]$p < .05$.

blended response variables: negative experience, positive experience, and hard but thought-provoking. Adjusted odds ratios are shown in Table 2.

Considered as a group, HPD individuals did evidence significantly greater negative experience (AOR, 2.5, 95% CI, 2.0–3.2), and significantly less positive experience (AOR, .6, 95% CI, .6–.7) in completing the survey. They also, however, were significantly more likely to indicate that the survey was hard but thought-provoking (AOR, 2.4, 95% CI, 2.1–2.6) than those with no such history, even when demographic characteristics were controlled. When compared to Caucasians, African Americans were 1.4 times (95% CI, 1.1–1.8) more likely to indicate that the survey was hard but

Made me think more deeply→ Made feel upset↓	1 **Very or somewhat untrue**	2 **Unsure**	3 **Very or somewhat true**
1 **Very or somewhat true**	Negative experience (2.7%)	Ambivalent (slightly negative) (1.2%)	Hard but thought provoking (13.1%)
2 **Unsure**	Ambivalent (slightly negative) (1.2%)	Unsure (3.3%)	Ambivalent (slightly positive) (5.0%)
3 **Very or somewhat untrue**	No effect (33.6%)	Ambivalent (slightly positive) (9.5%)	Positive experience (29.9%)

FIGURE 1. *Combined survey response variable categories and distribution.*

thought-provoking and when compared to individuals categorized as straight, individuals categorized as mostly straight (AOR, 1.3, 95% CI, 1.1–1.5), bisexual (AOR, 1.4, 95% CI, 1.1–1.7), or mostly gay/lesbian (AOR, 1.7, 95% CI, 1.2–2.5) to fall into the "hard but thought-provoking" category. Females were slightly more likely than males to indicate this experience as well (AOR, 1.3, 95% CI, 1.2–1.5).

Examination of the Qualitative Data

Since the quantitative results showed heightened likelihood of "negative experience" and classification in the "hard but thought-provoking" category among HPD participants, qualitative data were also coded by the emotional valence of response (negative, neutral, or positive). Notably, there were interesting discrepancies between the quantitative and qualitative data with regard to emotional valence such that indicating high levels of "upsetness" on the quantitative items was only rarely followed by qualitative explanations with negative emotional valence. More specifically, of all non-HPD respondents with quantitative responses falling into the "negative experience" category, 18% shared negatively valenced comments in response to the qualitative questions; 22% of HPD participants in the quantitative "negative experience" category shared negatively valenced comments. Of all non-HPD respondents falling into the "hard but thought-provoking" category, 9.1% shared negatively valenced comments; 11.1% of HPD participants in this category shared negatively valenced comments in response to the open-ended questions.

TABLE 2. Logistic Regression on any Suicide, Non-Suicidal Self-Injury, and Psychological Distress Adjusted for Race/Ethnicity, Sex, and Sexual Orientation (n = 13,131)

Characteristic	Positive experience		Hard but thought provoking		Negative experience	
	N (%)	OR (95% CI)	N (%)	OR (95% CI)	N (%)	OR (95% CI)
Sex						
Male	3,523 (26.9)	1.0	1,510 (11.5)	1.0	302 (2.3)	1.0
Female	3887 (29.6)	1.0 (.9–1.1)	1,969 (15.0)	1.3^a (1.2–1.5)	407 (3.1)	1.3^c (1.1–1.7)
Sexual Orientation						
Heterosexual	4,031 (30.7)	1.0	1,641 (12.5)	1.0	289 (2.2)	1.0
Mostly heterosexual	3,637 (27.7)	.9 (.8–.9)	2,153 (16.4)	1.3^a (1.1–1.5)	565 (4.3)	1.9^a (1.5–2.5)
Bisexual	2,967 (22.6)	.7 (.5–.8)	2,232 (17.0)	1.4^b (1.1–1.7)	683 (5.2)	2.4^a (1.6–3.5)
Mostly gay/lesbian	2,888 (22.0)	.6 (.4–.9)	2,521 (19.2)	1.7^b (1.2–2.5)	735 (5.6)	2.8^b (1.5–5.5)
Gay/lesbian	4,333 (33.0)	1.1 (.9–1.4)	1,930 (14.7)	1.3 (.9–1.8)	551 (4.2)	2.2^b (1.2–3.9)
Race/Ethnicity						
Caucasian	3,926 (29.9)	1.0	1,720 (13.1)	1.0	355 (2.7)	1.0
African American	4,688 (35.7)	1.3 (1.1–1.6)	2,337 (17.8)	1.4^b (1.1–1.8)	105 (.8)	$.3^c$ (.1–.8)
Hispanic	3,939 (30.0)	1.0 (.9–1.2)	1,891 (14.4)	1.1 (.0–1.4)	341 (2.6)	1.0 (.6–1.6)
Asian	3,808 (29.0)	1.0 (.9–1.1)	1,667 (12.7)	.9 (.8–1.1)	328 (2.5)	1.0 (.7–1.3)
Other	3,624 (27.6)	.9 (.8–1.0)	1,956 (14.9)	1.2 (1.0–1.4)	450 (3.8)	1.4^c (1.0–1.9)
History of suicide-related behavior						
No	4,044 (30.8)	1.0	1,576 (12.0)	1.0	302 (2.3)	1.0
Yes	2,968 (22.6)	$.7^a$ (.6–.7)	3,033 (23.1)	2.1^a (1.8–2.4)	709 (5.4)	1.9^a (1.5–2.5)
History of Non-suicidal Self-injury						
No	4,057 (30.9)	1.0	1,562 (11.9)	1.0	276 (2.1)	1.0
Yes	3,033 (23.1)	$.7^a$ (.6–.8)	2,968 (22.6)	2.1^a (1.8–2.3)	801 (6.1)	2.7^a (2.1–3.4)
Psychological distress (K-6)						
Low (6–13)	3,966 (30.2)	1.0	1,261 (9.6)	1.0	302 (2.3)	1.0
Moderate (14–18)	3,532 (26.9)	$.8^a$ (.7–.9)	2,574 (19.6)	2.2^a (2.0–2.5)	420 (3.2)	1.3^c (1.1–1.7)
High (18–24)	2,298 (17.5)	$.4^a$ (.4–.5)	3,834 (29.2)	3.8^a (3.7–4.5)	748 (5.7)	2.4^a (1.7–3.4)

Note. All models adjusted for sex, race/ethnicity, and sexual orientation.
$^a p < .001$; $^b p < .01$; $^c p < .05$.

To assess the specific nature of subjective survey impact, coders looked for comments suggesting that respondents may be experiencing worrisome behavioral impulses (e.g., self-injurious intentions) or potentially enduring negative affect (e.g., depression or anxiety).

Comments associated with each classification depicted in Figure 1 and derived from HPD respondents only are presented in Table 3. As reflected in the table, variation within each category was generally confined to short-term emotional impact at worst and gratitude or self-reflective insight at best. Of all individuals with negatively valenced comments, no one reported concerning behavior intent or potentially

TABLE 3. Examples of Comments among Respondents with a History of Psychological Distress (HPD) for Each Response Category

Response Category % for overall sample; $n = 13,131$ (% for content-experienced sample; $n = 3,476$)	Response examples from individuals with a history of ST/SB, NSSI, or elevated K-6
No effect 33.6% (26.0%)	Most of these questions are no-brainers.
	I think about some of these things almost every week, usually when I'm trying to rationalize everyday difficulties.
	I agreed to do the survey and was ready for it, nothing upset me because I was prepared for what was to come.
	If I was uncomfortable with the fact that I have depression and self-hurt, I wouldn't do it.
Positive experience 29.9% (23.7%)	I appreciate surveys like this and feel that they should be done a lot more often.
	I am confident with my life, and can talk freely about my life and difficulties. The survey is actually interesting to me.
	I am pretty comfortable altogether with my life. I know I have dark periods, but without rain, no one smiles at the sunshine.
	It doesn't make me upset to be truthful with myself.
Hard but thought provoking 13.1% (22.4%)	I realized that some things that seemed okay at the time are not actually alright, and that there are parts of my life that I've never shared with anyone and that I should. I really appreciate the opportunity to participate in this survey, and I hope my answers will help others. Thank you.
	I felt uncomfortable because I never really thought about it this deeply. It's taboo after you get close to the deed or do it and you keep it from your mind because you're scared of it. But these questions led me to consider why I did it and why counseling is good and hopefully I'm closer to letting it go.
	Maybe I should be looking for meaning in my life instead of resigning myself to a feeling of hopelessness all the time.
	I think, as I was starting to anyway, that I may need to go back to therapy.
Unsure or Ambivalent 20.5% (22.5%)	Everything I said was true. I didn't have to think too much about it.
	I already know about the things in my life that the survey included.
	Answering the questions really just makes me think about the history of my actions and my views on things. It really did not evoke any serious deep thought into any aspect of myself.
	I guess I hadn't really thought about it since then until this survey.
Negative experience 2.7% (5.2%)	I was reminded of a few memories that were extremely painful.
	It just made me feel more depressed about myself, since it made me evaluate how much of a failure I make myself feel like sometimes, but it also reassured me in my confidence and trust in the friends I love.
	I did something I do only a few times a year—I cried. I'm going to have to meditate on this subject for some time today. I kind of feel upset now.

(Continued)

TABLE 3. Continued

Response Category % for overall sample; $n = 13,131$ (% for content-experienced sample; $n = 3,476$)	Response examples from individuals with a history of ST/SB, NSSI, or elevated K-6
	By immersing myself in my work or focusing on something that doesn't depress me I forget I'm generally overall a "dissatisfied" person (borderline depressed) but this survey brought back all those thoughts which will probably make me unproductive for the rest of the day.

enduring negative affect. The only behavioral impact mentioned at all was the intention to seek therapy.

DISCUSSION

Online surveys are an increasingly common means of assessing adolescent and young adult risk and mental health behaviors and statuses. A small but growing body of research suggests that web-based surveys increase honest disclosure of private behaviors, such as NSSI, suicidal thoughts or actions, and psychological distress (Langhinrichsen-Rohling, Arata, O'Brien et al., 2006; Rosenbaum, Rabenhorst, Reddy et al., 2006). Web-based surveys may provide a forum for disclosing behaviors and emotional states never previously revealed in off-line exchange (Smith, Poindexter, & Cukrowicz, 2010; Sussman, Robins, & Earls, 1987; Whitlock, Eckenrode, & Silverman, 2006). However, since the nature of web-based survey administration is so private and unobservable, concern about the emotional and psychological impact of web-based items, particularly of questions related to mental health status, is understandable.

Consistent with previous research (Blecker-Blease & Freyd, 2006; Langhinrichsen-Rohling, Arata, O'Brien et al., 2006), the findings reported here suggest that while online surveys about mental health status may cause discomfort for

individuals with relevant history or experience, little of this discomfort heightens behavioral risk intention or leads participants to regret survey participation. Indeed, only 3.7% of the HPD population who indicated that the survey upset them or was "hard but thought-provoking" shared negatively valenced comments in response to the follow-up open-ended questions. Of these, not a single comment suggested that the respondent was at heightened risk of negative behavior, though there was some suggestion of short-term ruminative tendencies. Despite the large number of individuals who received and participated in the survey across 8 schools, not a single IRB-reportable adverse incident was received during or following survey administration.

Our results also suggest that the experience of responding to survey questions about sensitive topics for those with prior experience regarding sensitive areas probed may be more nuanced—and even beneficial for participants—than is superficially evident. Individuals with current or past psychological distress were nearly three times more likely than those without these experiences to indicate that although the survey was difficult, it inspired them to think more deeply about their lives. The potency of this finding is even more interesting when we consider that, although participant NSSI and suicidal thoughts or behaviors may be long past, those with elevated *recent* psychological distress (as

evidenced by the K-6) were also significantly more likely than those without this experience to report that the survey was difficult but inspired reflection. Such findings are consistent with literature documenting the salutatory effects of some stress (Le Fevre, Matheny, & Kolt, 2003; O'Sullivan, 2011; Selye, 1991) and suggest that responding to well-designed questions on web-based surveys may provide opportunities for reflection rare in contemporary young adult life.

That the trends documented in HPD participants are similar to those documented in members of demographically underrepresented populations is notable as well. In keeping with the finding that students who have experienced significant mental health issues were more likely than their peers to report the survey experience as difficult but thought provoking, minority group membership was also associated with higher levels of simultaneous distress and reflection, even when mental health history was controlled. The overall trends suggest that although surveys with sensitive items may be more emotionally arousing for young adults with direct and indirect experience with life adversity, particularly in the area of mental health, they may also play an important role in provoking self-reflection. The qualitative data provide insight into why this may be.

Overall, respondents suggested that surveys which ask individuals to report on sensitive, private, or otherwise difficult topics may also require or prompt self-reflection that deepens current or retrospective understanding of core life challenges, raises new concerns about themselves or others, provokes thinking about future directions and/or changes in life and promotes disclosure and or formal therapy-seeking. Much more common than negatively valenced comments—even among HPD individuals—were neutral or positively valenced ratings and comments. Unlike the negatively valenced comments, many of the positively valenced comments

suggested beneficial behavioral effects, such as seeking therapy or sharing insights with others, or showed respondents using survey items as a means of reviewing and, perhaps most importantly, reframing their past in kinder terms than they may have granted themselves prior to their survey participation. Such findings resonate with research conducted on youth suicide screening programs, where researchers have found that students with marked depression symptoms report more distress than others but also show a decrease in suicide thoughts following the initial screening (Gould, Marrocco, Kleinman et al., 2005).

There is also evidence to support the claim that emotional and cognitive reactions to research participation are actually separate experiences, with "feeling upset" correlated with "thinking more deeply." Research suggests that when studies are structured in a respectful manner with clearly communicated goals, participants' emotions, however strong, may not undermine their understanding of the potential benefits of participation (Neman, Kaloupek, Keane et al., 1997). Others have suggested that since the word "upset" is nonjudgmental and less leading than other words, that "feeling upset" may, in fact, be a normative reaction to surveys on sensitive topics such as NSSI and suicide (Ybarra, Langhinrichsen-Rohling, Friend et al., 2009). This perspective resonates with the nature of comments made by HPD respondents who indicated that the survey was a fully negative experience even though not one indicated any adverse behavioral reaction or intention as a result of taking the survey. Instead, respondent comments suggested discomfort with the emotions and associations aroused by the survey items—a response which makes sense and may, ultimately, be beneficial. From an ethical perspective, these results invite ethics committees to reframe how they view potential risks for this type of research (both by topic of sensitive research

and method of Internet surveys) since assumption of potential risks may be overly conservative and perhaps unnecessarily restricting of research designs.

More research is still needed to better understand the effects of asking students who struggle with mental health issues about their experiences. Assessing respondent "upsetness" or the extent to which question banks provoked thought is helpful in understanding subjective experience of survey participation but does not go far enough in understanding behavioral effects or lasting rumination-provoking experiences. Longitudinal follow-up of respondents may help to ascertain to what degree survey participation engendered iatrogenic or salutary effects after survey completion. Similarly, understanding more about how participants weigh risks and benefits of participation in emotionally evocative studies is also important. Knowing how young adults in general, and those with experience in sensitive content areas in particular, assess the balance of risk and gain in surveys such as these would advance understanding of respondent experiences, perceptions, and belief about study participation.

Ironically, one of the most significant questions faced by Internet-era researchers and ethical reviewers of research is not how to solicit candid disclosures or to protect anonymity, but how to respond. The current focus on making research both accountable to the public well-being as well as envisioning research endeavors as a partnership between researcher and participant communities introduces interesting questions about how to translate research efforts into benefits for participants. This study suggests that the subjective experience of survey participation in which sensitive mental health questions are asked is likely to be more emotionally provocative for those with experience in the subject area under focus, raising important questions about how to enhance likelihood that involvement in such studies are of value to individual respondents. In web-based studies, because it is so easy to cease participation at any time, the very act of survey completion can be taken as an indication that the respondent finds the study focus of value. However, there is also value in asking how researchers might endeavor to balance the possibility of negative emotional responses with something positive at the close of the survey. While it is common to leave respondents with a list of local resources, use of the Internet may allow for an enhanced positive mood induction response, such as provision of positive feedback about survey participation or something more specific and gleaned from the survey itself about respondent strengths or assets.

AUTHOR NOTE

Janis Whitlock, Bronfenbrenner Center for Translational Research and Department of Human Development, Cornell University, Ithaca, New York, USA.

Celeste Pietrusza and Amanda Purington, Bronfenbrenner Center for Translational Research, Cornell University, Ithaca, New York, USA.

Correspondence concerning this article should be addressed to Janis Whitlock, Bronfenbrenner Center for Translational Research, Beebe Hall, Cornell University, Ithaca, NY 14853. E-mail: jlw43@cornell.edu

REFERENCES

American College Health Association. (2007). American College Health Association-National College Health Assessment Spring 2007 Reference Group Data Report (Abridged). *Journal of American College Health*, *56*(5), 469–479. Retrieved from

http://www.achancha.org/docs/JACH March 2008 SP 2007 Ref Grp.pdf.

Black, M. C., Kresnow, M., Simon, T. R., Arias, I., & Shelley, G. (2006). Telephone survey respondents' reactions to questions regarding interpersonal violence. *Violence and Victims*, *21*(4), 445–459.

Blanco, C., Okuda, M., Wright, C., Hasin, D. S., Grant, B. F., Liu, S.-M., & Olfson, M. (2008). Mental health of college students and their non-college-attending peers: Results from the National Epidemiologic Study on Alcohol and Related Conditions. *Archives of General Psychiatry*, *65*(12), 1429–37.

Blecker-Blease, K. A., & Freyd, J. J. (2006). The ethics of asking and not asking about abuse. *American Psychological Association*, *61*, 218–226.

Cook, A. S., & Bosley, G. (1995). The experience of participating in bereavement research: Stressful or therapeutic? *Death Studies*, *19*, 157–170.

Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depressions, anxiety, and suicidality among university students. *The American Journal of Orthopsychiatry*, *77*(4), 534–542.

Furukawa, T. A., Kessler, R. C., Slade, T., & Andrews, G. (2003). The performance of the K6 and K10 screening scales for psychological distress in Australian National Survey of Mental Health and Well-Being. *Psychological Medicine*, *33*(2), 357–362.

Gallagher, R. P. (2006). *National survey of counseling center directors*. Washington, DC: International Association of Counseling Services, Inc.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Mill Valley, CA: Sociology Press.

Gould, M. S., Marrocco, F., Kleinman, M., Thomas, J. G., Mostkoff, K., Cote, J., & Davies, M. (2005). Evaluating iatrogenic risk of youth suicide screening programs: A randomized control trial. *Journal of the American Medical Association*, *293*(13), 1635–1643.

Kessler, R. C., Berglund, P., Borges, G., Nock, M., & Wang, P. S. (2005). Trends in suicide ideation, plans, gestures, and attempts in the United States, 1990–1992 to 2001–2003. *Journal of the American Medical Association*, *293*(20), 2487–2495.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey. *Archives of General Psychiatry*, *62*, 593–602.

Kochanek, K. D., & Smith, B. L. (2004). Deaths: Preliminary data for 2002. National vital statistics reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, *52*(13), 1–47.

Lakeman, R., & FitzGerald, M. (2009a). The ethics of suicide research: The views of ethics committee members. *Crisis*, *30*(1), 13–19.

Lakeman, R., & FitzGerald, M. (2009b). Ethical suicide research: A survey of researchers. *International Journal of Mental Health*, *18*, 10–17.

Langhinrichsen-Rohling, J., Arata, C., O'Brien, N., Bowers, D., & Kilbert, J. (2006). Sensitive research with adolescents: Just how upsetting are self-report surveys anyway? *Violence and Victims*, *21*(4), 425–444.

Le Fevre, M., Matheny, J., & Kolt, G. (2003). Eustress, distress, and interpretation in occupational stress. *Journal of Managerial Psychology*, *18*, 726–744.

Neman, E., Kaloupek, D. G., Keane, T. M., & Folstein, S. (1997). Ethical decision making among trauma researchers. In G. K. Kantor & J. Jasinski (Eds.), *Out of the Darkness: Contemporary Perspectives on Family Violence* (pp. 271–281). Newbury Park, CA: Sage.

O'Sullivan, G. (2011). The relationship between hope, eustress, self-efficacy and life satisfaction among undergraduates. *Social Indicators Research*, *101*(1), 155–172.

Prinstein, M. J. (2008). Introduction to the special section on suicide and nonsuicidal self-injury: A review of unique challenges and important directions for self-injury science. *Journal of Counseling and Clinical Psychology*, *76*(1), 1–8.

Reynolds, S. K., Lindenboim, N., Comtois, K. A., Murray, A., & Linehan, M. M. (2006). Risky assessments: Participant suicidality and distress associated with research assessments in a treatment study of suicidal behavior. *Suicide and Life-Threatening Behavior*, *36*(1), 19–34.

Rosenbaurm, A., Rabenhorst, M. M., Reddy, M. K., Fleming, M. T., & Howells, N. L. (2006). A comparison of methods for collecting self-report data on sensitive topics. *Violence and Victims*, *21*(4), 461–471.

Selye, H. (1991). History and present status of the stress concept. In A. Monat & R. S. Lazarus (Eds.), *Stress and coping (3rd ed.)* (pp. 21–35). New York, NY: Columbia University Press.

Smith, P. N., Poindexter, E. K., & Cukrowicz, K. C. (2010). The effect of participating in suicide research: Does participating in a research protocol on suicide and psychiatric symptoms increase

suicide ideation and attempts? *Suicide and Life-Threatening Behavior, 40*(6), 535–543.

Sussman, L. K., Robins, L. N., & Earls, F. (1987). Treatment seeking for depression by black and white Americans. *Social Science & Medicine, 24,* 187–196.

Taylor, P. J., Awenat, Y., Gooding, P., Johnson, J., Pratt, D., Wood, A., & Tarrier, N. (2010). The subjective experience of participation in schizophrenia research: A practical and ethical issue. *Journal of Nervous and Mental Disease, 198,* 343–348.

Whitlock, J. L., Eckenrode, J. E., & Silverman, D. (2006). The epidemiology of self-injurious behavior in a college population. *Pediatrics, 117.*

Whitlock, J.L., & Purington, A. (June, 2011). *Validity and reliability of the non-suicidal self-injury assessment tool (NSSI-AT): Why use the NSSI-AT?.* Poster presented at the International Society for the Study of Self-Injury 6th annual conference, New York, NY.

Ybarra, M. L., Langhinrichsen-Rohling, J., Friend, J., & Diener-West, M. (2009). Impact of asking sensitive questions about violence to children and adolescents. *Journal of Adolescent Health, 45,* 499–507.