Trauma-specific Reactions to Sexual Assault Content in College Students: Considerations for Content Warnings

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Abstract

Much of the debate on content warnings has occurred with little empirical data to inform it. In the past five years this has started to change and in this most recent study, 185 students completed trauma surveys and a PTSD checklist and then read a passage that detailed a nonfiction account of a sexual assault of a female undergraduate. Participants were sent a follow up assessment 2 weeks later. Similar to previous studies, the majority of participants (94%), including those with a sexual assault history, read the passage even when offered an alternate reading with no traumatic content. In addition, those with a sexual assault history did not report an increase in PTSD symptoms in the following 2 weeks. However, unlike the two previous studies, those with a sexual assault history reported more distress right before and just after the reading. They also reported being more emotional during the study. This discrepancy in the findings is likely due to the use of a non-fictional account and the use of the more specific Sexual Experiences Survey (SES-SFR: Koss et al., 2007) to operationalize sexual assault. This suggests that student emotional responses to potentially triggering material are likely to vary depending on the type of trauma and the nature of the content presented.

Introduction

Content Warnings, also referred to as “Trigger Warnings” or “Content Notes”, have been highly controversial in academic settings over the past decade. However, much of the still influential early commentary on the topic occurred prior to any empirical data that could inform the debate (Ellison, 2016, AAUP, 2014; Lukianoff & Haidt, 2015). Partly because of this initial scarcity, researchers in the past 5 years have taken to the task of investigating how potentially triggering material impacts students and whether warning those students makes any difference. The goal of this paper is to concisely review this work and present new data relevant to those with sexual assault histories.

To date, the research has been diverse in its objectives and goals but can be thought of as trying to achieve three major objectives: 1) How distressed do students get when reading potentially triggering material, 2) Does providing trigger warnings make a difference in how students respond to material, and 3) Does trauma relevant material exacerbate symptoms in those with PTSD? While there is still work to do, the field is starting to move towards some consensus on all accounts.

How distressed are students by triggering material?

In general, students report being somewhat upset when reading or seeing disturbing content (Sanson, Strange, & Gerry, 2019; Kimble, Flack, Koide, Bennion, Brenneman, & Meyersburg, 2021; Kimble, Koide, & Flack, 2022). This effect is not entirely surprising as there is a long history of research indicating that potentially triggering material in the form of movies, text, and pictures will reliably produce PTSD-like symptoms including physiological reactivity (Woodward & Beck 2017; Holmes & Bourne, 2008; Pole, 2006). Sanson and colleagues (2019) have published the most comprehensive recent work in this regard reporting on six experiments which included students and non-students in their samples. While it was not
the primary question in their analyses, Sanson et al. (2019) concluded that participants demonstrated more negative affect and PTSD-like intrusions and avoidance when shown “more negative material” as opposed to “less negative material.” In some of their experiments these were fictional passages while in other experiments they were films. Importantly, while students were more distressed by the negative material, this material did not seem to disproportionately affect those with trauma histories. In 2021, Kimble et al. looked at student responses across four institutions to a passage from literature that included sexual and physical assault content. Students reported moderate distress, endorsing subjective units of distress (SUDs) scores between 5 and 6 on an eleven-point SUDs scale. This contrasts to SUDS scores that averaged below 3 two days later. Similar to the work of Sanson et al. (2019), distress was not higher in those with relevant trauma histories. These findings were replicated in a follow up study by Kimble and colleagues (2022) in which undergraduates again reported more distress to a passage containing sexual and physical assault as compared to a control passage. Once again, those with relevant trauma histories did not report more distress. In summary, when presented with potentially triggering material, students will be briefly and moderately distressed, but this seems to happen to all students regardless of whether they have a trauma history or not.

**Do Content Warnings work?**

There is further growing consensus that this distress is not affected by content warnings, either positively or negatively. At this point, a number of studies have investigated the effects of warning students of potentially upsetting material (Boysen, 2021; Kimble et al. 2022; Bellet, Jones, & McNally, 2018; Bridgland, Green, Oulton, & Takarangi, 2019; Bruce & Roberts 2020; Bridgland, Bamard, & Takarangi, 2022; Jones, Bellet, & McNally 2020), and the findings have been mostly mixed with respect to whether trigger warnings affect how students respond to the material. In many cases no effect was found but Bruce and Roberts (2020) reported that warning may affect comprehension, and Jones et al. (2020) found that warnings increased the centrality of trauma to one’s identity. Bridgland and Takarangi (2021) found that warnings did not affect a number of study outcomes but did result in significantly higher Impact of Event Scale Scores (IES: Weiss, 2007) 2 weeks later. These fairly specific findings bear replication, but there is increasing evidence that students demonstrate more anticipatory anxiety prior to distressing content when they are warned that the material might be disturbing as compared to conditions in which they are not warned (Bellet et al., 2020, Bridgland et al., 2019; Bridgland & Takarangi, 2021). The data suggest that content warnings might not make students respond more (or less) anxiously to the actual material, but they do seem to make them more anxious in anticipation of that material.

One might think that this anticipatory anxiety might lead to widespread avoidance of potentially triggering material, yet there is very little evidence that this is the case. Across a range of studies, participants who are warned do not appear to use that warning to avoid the material, and there is some evidence that it may produce further engagement (Bridgland & Takarangi 2022; Bruce & Roberts 2020; Kimble et al., 2021; Kimble et al., 2022). This is not to say that avoidance is nonexistent, as Kimble and colleagues (2021; 2022) have found that approximately 3–5% of students read an alternative passage rather than a potentially triggering passage, but these rates do not differ based on trauma histories.
Bridgland and Takarangi (2022) found that the option to “cover” disturbing pictures only occurred on 3.75% of the trials and did not differ based on whether those pictures had been warned or not.

Is PTSD exacerbated by exposure to triggering stimuli?

While there are some reasons to be concerned about college students in general, content warnings are primarily intended to assist those with relevant trauma histories and ongoing psychological concerns. Historically the concern has been that individuals with PTSD will be dysregulated by exposure to the material and experience an increase in their symptoms. This requires a longitudinal design and Kimble and colleagues (2021; 2022) have completed two studies to date with the ability to assess this. In both studies, the researcher had students read a passage from Toni Morrison’s *The Bluest Eye* which contained a depiction of both physical and sexual assault. Prior to doing the reading, the students completed the PTSD Checklist for the DSM-5 (PCL-5: Weathers et al., 2013) inquiring about their PTSD symptoms in the past 2 weeks. Two weeks later, the students took the PCL-5 a second time, again inquiring about their symptoms in the past 2 weeks. Neither study found an increase in PTSD symptoms over a 2 week period even in those who would likely qualify for a PTSD diagnosis. Their PCL-5 scores actually went down from Time 1 to Time 2 just as they did for those who did not qualify for a provisional PTSD diagnosis (See Figs. 1 and 2). While those with a provisional PTSD diagnosis reported more distress (as measured by the SUDS) and more PTSD symptoms across all time points in the study, there was no indication that their symptoms were made worse by participating in the study and reading the difficult passage.

The current study

The current study had a number of goals designed to extend this work. One goal was to replicate the previous research but using a passage that was explicitly sexual assault related from Jon Krakauer’s *Missoula*. This passage would be closer to the experience of a female undergraduate student, particularly in comparison to the previous research using Toni Morrison’s novel set in the 1930s. The *Missoula* passage is a detailed account of the events before, after, and during a real assault that occurred on a college campus.

Secondly, most previous assessments of trauma in this line of research, including the previous work by our lab, have used the Life Events Checklist (LEC: Weathers et al., 2013). The LEC has 17 items that cover a wide range of possible traumas. Only two of the questions are related to sexual assault or unwanted sexual experiences. To implement an improved assessment of sexual assault, this study used Mary Koss’s Sexual Experiences Survey Revised (SES-SFR: Koss et al., 2007). The SES-SFR uses explicitly consent-based and behavioral language in all items (i.e., “Someone put their penis into my vagina or butt, or someone inserted fingers or objects without my consent”). This has been demonstrated to improve the validity and reliability of sexual assault assessment. Positive endorsements of such items are consistent with most legal and campus-based definitions of sexual assault. The short form of the SES contains questions about seven types of sexual assault: 1) non-consensual non-invasive sexual contact/touching, attempted non-consensual 2) oral, 3) vaginal, and 4) anal assault and completed non-consensual 5) oral, 6) vaginal, and 7) anal assault.
Finally, a significant limitation to the research to date has been a lack of qualitative responses or analysis at the individual level. The prevalence of a student being significantly triggered by course material, while emotionally significant for that individual, would not necessarily be a common occurrence. Triggering would not occur in those students who had never been traumatized or those who had been traumatized but from a different type of experience (i.e., natural disaster, motor vehicle accident). Even those with a corresponding trauma might not be triggered as they may have never developed PTSD or have successfully engaged in treatment and no longer find such material triggering. For all of the above reasons, the majority of students will never be triggered by difficult class material. However, there could be individuals who are significantly affected by potentially triggering material but whose experiences are missed in research designs that only investigate triggering using group differences in broad samples. The experiences of those few individuals could easily be subsumed in the broader average. They could even potentially be removed as outliers. This study included qualitative responses from the participants about how the reading affected them. Specifically, they were asked to comment on how their score changed over time and why they believed this was the case. While there may be no group differences, there may be a subset of individuals whose scores do increase and they attribute it to the reading.

**Method**

**Participants**

One hundred and eighty-six students enrolled in Introductory Psychology in a northeastern college participated in an IRB approved study in order to obtain one hour of research credit. Data were collected across two semesters in the fall of 2021 and the spring of 2022. Given the small size of the institution and the need for the privacy of the assault related data, the data were collected anonymously; the only demographics collected related to participant gender and racial/ethnic identification. All participants confirmed they were over the age of 18. Sixty-two percent identified as female, 36% as male, and 2% as non-binary or transgender. Sixty percent of the sample identified as White, 7% as Black, 15% as Asian/Asian-American, 6% as Hispanic, 1% as Native Hawaiian/Pacific Islander, 11% as multi racial, and 1% as Other. We did not collect data related to age or year in school to avoid possible identification by the researchers. There were no exclusionary criteria for the participants other than a requirement that they be at least 18 years old. Given that this was an introductory class, it is likely that participants were between the ages of 18 and 20, lived on campus, and were enrolled full time as students. All readings, questionnaires, and assessments were conducted online.

**Materials**

**Life Events Checklist for DSM-5**

The Life Events Checklist for the DSM-5 (LEC-5: Weathers et al., 2013) is a 17-item self-report inventory that screens for potentially traumatic event exposure. The 17th item asks whether the participant has ever experienced an extraordinarily stressful event that was not addressed in the previous 16 items. The
questionnaire measures whether a participant has experienced a traumatic event, witnessed an event, learned about it, it was part of their job, are not sure, or if the question was not applicable.

The LEC-5 is a moderately reliable measurement particularly with respect to items that were experienced by an individual (https://www.ptsd.va.gov/professional/assessment/te-measures/life_events_checklist.asp).

The LEC-5 was administered on Day 1 of the study to evaluate histories of potentially traumatic events (PTEs). Those individuals who endorsed items 8 and 9 as having “happened to them” were considered to have a “trigger related trauma.” Item 8 of the LEC asks whether they had experienced a “Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm).” Item 9 inquires whether they have had “Other unwanted or uncomfortable sexual experience.”

**Subjective Units of Distress Scale (SUDS)**

The SUDS (Wolpe, 1969) is a widely used scale that measures the amount of distress someone feels in the moment. An 11 point scale was used that ranged from 0–10 with higher scores associated with greater magnitude of distress. Participants completed the SUDS on both survey days in order to determine current feelings of distress. SUDS has high convergent (Spearman rho = .21, p < .05), discriminant (Spearman rho = .28, p < .05), predictive (Spearman rho = .51, p < .001) and concurrent (Spearman rho = .46, p < .001) validity.

**PTSD Checklist for DSM-5 (PCL-5)**

The PCL-5 (Weathers, Litz, et al., 2013) is a 20-item self-report survey that assesses the DSM-5’s 20 symptoms for posttraumatic stress disorder. Items are scored from 0 (not at all) to 4 (extremely). Higher scores are associated with greater magnitudes of PTSD symptoms with scores ranging from 0–80. A score of 33 is considered adequate for provisionally diagnosing an individual with PTSD. A 10- to 20-point score change often signifies a clinically significant change (unpublished data: https://www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp). In this study, “P-PTSD” will be used to designate those individuals above 33 on the PCL-5 and thus considered to have a provisional PTSD diagnosis. Similar to the psychometric properties of the original PCL, the PCL-5 has high convergent and discriminant validity, with Cronbach's alphas ranging from .76 to .97. Participants completed the PCL-5 during Day 1 and Day 14 and did so with respect to their most traumatic event.

**Revised Sexual Experiences Survey-Short Form (SES-SFR)**

The short-form victim version of the Sexual Experiences Survey (SES-SFR: Koss et al., 2007) was also used to assess sexual assault. It is the most frequently used self-report measure in research on sexual assault victimization (Kolivas & Gross, 2007). Anthony and Cook (2012) recommend use of the most recent revision of the SES (SES-SFR; Koss et al., 2007) to provide a consistent, consent-based, gender-neutral measure for comparison purposes across studies. In contrast to the original SES, the RSES uses explicitly consent-based language in all items, and thus positive responses are consistent with most legal and campus-based definitions of sexual assault. The short form of the RSES contains questions about
seven types of sexual assault (non-consensual non-invasive sexual contact/touching, attempted and completed non-consensual oral, vaginal, and anal assault).

**Reactions to Research Participation Questionnaire-Revised (RRPQ-R)**

The RRPQ-R is a 24-item questionnaire that measures participants’ reactions to engaging in a research study. Only items 3, 4, 5, 10 and 16 were used in this study, as they represented the Emotional Reactions Factor of the survey measure and consisted of questions such as “I was emotional during the research session” and “The research raised emotional issues for me that I hadn’t expected.” The questionnaire uses a 5-point Likert scale—from strongly disagree (1) to strongly agree (5). Therefore, total scores ranged from 0 to 20 with higher scores indicating stronger emotional reactions to participation. The internal reliability of the RRPQ-R has a Cronbach's alpha in the range of .82-.83, which is moderate.

**Procedures**

All students gave voluntary consent on Day 1 as the first part of their survey. The written consent informed them of the purpose and procedures of the study as well as their rights as participants consistent with the Belmont Report. Participants confirmed their consent electronically before proceeding to the questions. They completed the limited demographics, the first and second SUDS (given right before and after the reading), the Life Events Checklist (LEC), and the PTSD Checklist for the DSM-5 (PCL-5).

After completing the demographics and these surveys, participants were assigned to a passage from Jon Krakauer’s *Missoula* that can be found on pages 10–15. However, previous to reading the passage they received the following message:

“Content warning: Sexual Assault

The following passage comes from a book by John Krakauer, called Missoula, which details a prominent sexual assault that occurred in Montana. Please read it carefully as there will be a few comprehension questions at the end. We will also be timing how long you are on each page in order to use it as a dependent measure in our study.

If you prefer, however, it is acceptable for you to do an alternate reading of identical length from the same book. If you choose this alternate reading, you will still receive credit for the study. Although this passage does refer to the fact that an assault occurred, it does not detail the assault.”

This alternate reading can be found on pages 330–336 of Krakauer’s text. The neutral passage was of similar length but only referred to the fact that a sexual assault had occurred.

After completing the reading, participants immediately completed a Subjective Units of Distress Scale (SUDS), answered the comprehension questions, and then the RRPQ. At that point, their Day 1 session was complete. Two weeks later, all participants were again sent an online link, this time with a 3rd SUDS and a final PCL-5 which asked them about their symptoms in the past 2 weeks. They were asked to
access their PCL-5 score from 2 weeks prior, compare it the PCL score they just completed, and then given the following instructions:

Please write an explanation below that must be at least 50 words long that explains why your score is the same or different. Keep in mind that higher scores mean more symptoms and lower scores mean fewer symptoms related to the stressful experience. Scores that differ by a few points are essentially very similar and don’t necessarily reflect a meaningful difference. However, regardless of the change in your score or not, please explain why you think it changed or more or less stayed the same. For example, if you had an initial score of 20 and a later score of 27, please tell us why you think your score went up. It might even be possible that you misunderstood the instructions at one of the two times or you simply clicked through the answers because you were in a rush. If that is the case, please let us know: the most important thing is for us to know the truth! This will help us preserve the validity of the responses of you and all your classmates.

Keep two things in mind with your answer. Your first score came from the first day in which you completed the survey BEFORE you did the potentially triggering reading (i.e., you might have a higher score from Day 1, but it can’t be because of the reading because you did the reading after you filled out the survey). Please explain any similarities or differences in your scores as you understood them that might give us an appreciation for the differences (or lack thereof) in your scores.

Subsequently, these qualitative responses were categorized by three independent raters (HD, EN, MK) blind to trauma history into one of the following six categories:

<table>
<thead>
<tr>
<th>Categorization of qualitative responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>There was no change in the score</strong></td>
</tr>
<tr>
<td>The PCL symptoms were <strong>higher</strong>, and this was attributed to having read the passage</td>
</tr>
<tr>
<td>The PCL symptoms were <strong>lower</strong> and this was attributed to having read the passage</td>
</tr>
<tr>
<td>The PCL scores were <strong>higher</strong> but some non-reading related reason was provided</td>
</tr>
<tr>
<td>The PCL scores were <strong>lower</strong> but some non-reading related reason was provided</td>
</tr>
<tr>
<td>No response was provided</td>
</tr>
</tbody>
</table>

Assignment of response to category was done by majority vote. In no cases did the three raters choose three different categories.

Participants then completed the SES-SFR and were asked a few additional questions about their previous experience with content warnings. They then received a debriefing form, were thanked for their participation, and were given research credit.

**Results**
Sexual Assault History

Sexual assault histories were assessed with the LEC and the SES-SFR. Reported in Table 2 are rates of assault in male/female/non-binary participants broken down between the Life Events Checklist and the SES-SFR. Rates are higher on the LEC as the rates include endorsements of “Unwanted Sex” in addition to “Sexual Assault.” In both cases, rates reported are lifetime rates, not only during college.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Male</th>
<th>Female</th>
<th>Non-binary</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEC: Sexual Assault/Unwanted Sex (Items 8 or 9)</td>
<td>21%</td>
<td>43%</td>
<td>33% (n = 3)</td>
</tr>
<tr>
<td>SES: Attempted or Completed Sexual Assault</td>
<td>7%</td>
<td>32%</td>
<td>100% (n = 1)</td>
</tr>
</tbody>
</table>

Table 2
Rates of sexual assault on the LEC and SES-SFR

Avoidance of Triggering Passage

Ninety-four percent of the sample chose to do the assigned triggering reading. Six percent (n = 11) decided to read the alternate passage. Of those who reported having done the alternate reading, 9 of the 11 (82%) did not report any unwanted sexual experience on the LEC, and 2 of the 11 (18%) did. A chi-square indicates that there was no more avoidance of the triggering passage by those reporting an unwanted sexual experience than those who had not, x²(1) = 1.54, p > .05). Table 3 summarizes the reasons cited by those who chose the alternate reading (they could check all that apply).

<table>
<thead>
<tr>
<th>Reason</th>
<th>n=</th>
</tr>
</thead>
<tbody>
<tr>
<td>“It seemed more interesting”</td>
<td>2</td>
</tr>
<tr>
<td>“I preferred not to read the more difficult passage because I expected it to be unpleasant”</td>
<td>8</td>
</tr>
<tr>
<td>“I was afraid I would be triggered emotionally by the difficult passage”</td>
<td>1</td>
</tr>
<tr>
<td>“Other”</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3
Reasons for avoiding the triggering passage

Of those 11 who chose the alternate reading only seven completed the SES-SFR on Day 14. Of those seven, none reported a history of attempted or completed sexual assault.

RRPQ Results

Individuals who reported an unwanted sexual experience or sexual assault on the LEC-5 were more likely to report “I was emotional during the research session” than those who did not, t(172) = -2.13, p = .04. This finding was mirrored by those who reported attempted or completed anal, oral or vaginal sex on the SES as compared to those who had not, t(127) = -2.12, p = .04. In addition, for those that reported assault on the SES in comparison to those who didn’t, there was a statistical trend for the RRPQ item “I experienced

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intense emotions during the research session and/or part of the study”, t(127)=-1.80, p = .08. Using the SES, a statistical trend was also present for the overall Emotional Reaction Subscale, t(127)-1.79, p = .08.

**SUDS scores as a function of Time and Trauma History**

We used a repeated measures ANOVA with Trauma (Yes v. No) and Time (Before Reading, After Reading, Two Weeks After) to evaluate how distress scores may have changed over time. Using the LEC as the independent variable, there was only a main effect for Time, with SUDS scores highest after the reading, intermediate before the reading, and lowest 14 days later, F(2,119) = 50.41, P < .001. There was no main effect for Trauma, nor was there a Trauma x Time interaction for SUDS scores. However, these findings differed when the SES was used as the independent variable (See Fig. 3). In particular, there was both a main effect for Time and an interaction in which those with a history of attempted or completed oral, anal, or vaginal assault were higher on their SUDS both before and after the reading, relative to 2 weeks later, F(2,119) = 3.91, p = .02.

**PCL-5 Scores as a function of Time and Trauma History** We used a repeated measures ANOVA with Trauma (Yes v. No) and Time (Day 0 v. Day 14) to evaluate how PCL-5 scores may have changed over a 2 week period and specifically whether those with a relevant trauma history were “triggered” over that period by having done the reading. There was no significant Trauma x Time interaction indicating that those with trauma histories did not experience an exacerbation of symptoms as a result of having done the triggering reading, F(1,119) = 1.54, p > .05. There was, however, a main effect for Trauma, with those reporting a history of sexual assault on the LEC reporting higher PCL scores at both time points, F(1,119) = 17.61, P < .001. See Fig. 4. These findings were mirrored by endorsements of attempted or completed oral, anal, or vaginal sex on the SES. There was also no significant interaction between Trauma and Time, but there was a significant main effect for Trauma, F(1,119) = 15.40, p < .001.

**PCL-5 Attributions**

Approximately 50% of the participants had PCL scores that went up from Day 0 to Day 14 (See Table 4). Of those participants for whom the scores went up, only 3 were categorized by the raters as having gone up because they did the reading. The rest reported their scores having gone up for other reasons (tough week, recent break up, stress at home, etc). Of note, the average increase of the three participants from Day 0 to Day 14 was 2 points on an 80 point scale. One participant went from a score of 1 to 3, another from 4 to 7, and the third from 12 to 13. This would indicate that the three participants who reported their scores having gone up because of the reading are participants whose scores are well below the threshold for PTSD. No participant with scores above the PTSD cut off of 33 reported their scores having gone up because of the reading.
This work was a replication and extension of two studies previously carried out by Kimble and colleagues (2021; 2022) with the goal of better understanding how students respond to potentially triggering material and whether these responses were affected by a relevant trauma history. The three studies showed consistency with respect to the following findings:

- **All students, even those without trauma histories, are moderately distressed after reading a potentially triggering passage.**
- **Students largely don’t avoid trauma-relevant material. The majority of students in the studies chose to read the potentially triggering passage.**
- **Of those who chose the alternative passage, only a minority report they did so because “I was afraid I would be triggered emotionally by the difficult passage”**
- **PTSD symptoms are not exacerbated by a triggering passage in individuals with an assault history, at least not over a 2 week period.**

The present study added to the above findings:

- **The RRPQ results demonstrates that those with sexual trauma histories were “more emotional during the research session” after reading a potentially triggering passage.**
- **In the present study, those with sexual assault histories reported more distress both before and after completing the reading compared to those with no assault history.**
- **For those participants for whom their PCL scores did increase over a 2 week period, only a minority attributed this increase to having done the reading and those increases were small.**

### Table 4: Percent attributions for PCL score changes

<table>
<thead>
<tr>
<th>Attributions for PCL Scores</th>
<th>% Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>No change in score</td>
<td>20</td>
</tr>
<tr>
<td>PCL scores went down (got better) because of reading</td>
<td>0</td>
</tr>
<tr>
<td>PCL scores went down (got better) for other reasons</td>
<td>30</td>
</tr>
<tr>
<td>PCL scores went up (got worse) because of reading</td>
<td>3</td>
</tr>
<tr>
<td>PCL scores went up (got worse) for other reasons</td>
<td>47.5</td>
</tr>
</tbody>
</table>
These findings present a complex picture of how students with sexual assault histories respond to a potentially triggering passage. Students with sexual assault histories do appear to be somewhat more distressed and more emotional before and soon after a difficult passage. However, they do not seem to avoid the passage even when warned, and the passage does not exacerbate any ongoing assault related symptoms, at least not over a 2 week period. In the subset of students whose symptoms do increase over a 2 week period, few of them attribute this to the reading.

### Avoidance of Traumatic Material

In large part, students did not avoid the potentially triggering passage even when it was clear that the passage was coming and that it was an explicit account of a sexual assault of a female college student. While still relatively low, the 6% rate of avoidance is slightly higher than in our past research (~3–4%: Kimble et al., 2021; 2022). This is likely attributable to a couple factors. First, in the previous study, the passage was from a classic piece of American literature (*The Bluest Eye* by Toni Morrison) and the fictional aspect may have created a sense of safety and distance that this real life account did not. Second, the previous study also included in the “Trigger Trauma” group participants who had experienced a physical assault because the Toni Morrison passage had physical assault elements as well. Those with physical assaults may not be as avoidant of material as those who have experienced a sexual assault.

However, the overall avoidance rate remains fairly low and there is no large scale avoidance of warned content that some critics of trigger warnings argue will occur if they are used regularly in the classroom. Of note in this study is the fact that students could avoid this material with no penalty, i.e., it was very clear that they would receive credit for participation regardless of which passage they read. This is quite different from what they would experience in the classroom in which not reading assigned material might be associated with a lower grade or embarrassment. Therefore, one would expect avoidance in the classroom to be even lower than the avoidance seen in this study.

In addition, and somewhat surprisingly, warned material does not seem to be avoided at a greater rate by those with a relevant trauma. In this study, and in the 2021 study, students with a triggering trauma avoided the possibly triggering material at the same rate as those without. In this study, of the 64 participants who reported a triggering trauma on the LEC, only 2 (3%) avoided the triggering passage. Of the 116 participants without a triggering trauma, 9 (8%) avoided the triggering passage. The chi square did not indicate that this was a significant difference but this might just be an issue of power as so few participants avoided the passage at all. However, given the pattern in the findings, one could speculate that those with relevant traumas actually want to engage with the material. Future research might inquire not only why they avoided the material, but also why they read it. In summary, the students in our sample didn’t seem to avoid triggering material and the critique that providing content warning in the classroom will result in widespread avoidance is not consistent with our data.

### Exacerbation of PTSD symptoms
In three studies, we have consistently found that exposure to trauma-relevant readings does not increase PTSD symptoms in those with relevant traumas. When we began this research, we hypothesized that PTSD symptoms would increase as a function of exposure to triggering material, i.e., that those with trauma histories would be triggered by the material and they would find themselves experiencing more intrusive symptoms, avoidance, and hyperarousal. We have seen no evidence of this. In light of this consistent evidence, it is fairly clear that, if an individual is triggered, the process does not occur in the manner we originally hypothesized. This is further supported by the qualitative evidence provided in this most recent study. Only three of the individuals who reported their PTSD symptoms increasing attributed that increase to the reading. In addition, the increases in those three individuals averaged just 2 points on an 80 point scale. This would be equivalent on the PCL of endorsing a “4” rather than a “2” or a “2” rather than a “0” on just one of the 20 items on the PCL. Odds are this small increase is actually just random variation, and the student may be generating a post hoc explanation for this apparent increase in symptoms. In general, students with triggering traumas don't attribute increases in symptoms to material they may have been exposed to a reading.

We had purposely included these qualitative responses in our most recent study for fear that there were a subset of students who were quite distressed and triggered by the material but were “lost in the average” of those who were not triggered. It seemed possible, if not likely, that while we did not see increases in symptoms on average in our previous studies, there may have been a minority of students who were significantly triggered by the material but their experiences were missed because there was no analysis at the individual level. While this sample is small, this does not seem to be the case; there were few students in this study who reported that their symptoms went up over a 2 week period because they did the reading.

After three studies, we have developed an appreciation that our time scale simply may not capture the experience of triggering as it may actually occur. The PCL we provide at 14 days asks about their symptoms in the “past two weeks.” If increased distress occurs briefly (i.e. for a few hours after the reading) than our measure may not capture this. Future studies might want to use ecological momentary assessment techniques in the hours subsequent to a reading to look at the time course of “recovery” after an exposure. We would predict that those with triggering trauma might show no difference in distress scores over long periods, but they may show differences in the slope of recovery in the hours following exposure.

**Distress (SUDS) scores before and after a triggering reading**

Our previous research demonstrated that those with a triggering trauma are not more distressed right after doing the reading than those without a triggering trauma. In that research, we consistently found that all participants reported higher distress right after the reading which dissipated within 48 hours regardless of relevant trauma. All students responded similarly. Those with a relevant trauma history did not seem to be unusually distressed. When using the LEC in this study (as we had in the previous studies) we found this to be the case once again. However, when using the SES, the findings were different. In this
study, those in the SES-SFR trigger trauma group would have experienced attempted or completed oral, anal or vaginal sexual assault. It did not include those who had experienced unwanted sexual touching, an assault experience that is known to produce less psychopathology. Therefore, this study defined those with a triggering trauma to be individuals with more egregious assaults that are likely to cause significantly more distress. This, in combination with the fact that the passage was specific to sexual assault, may have produced the findings we had not seen previously. In particular, those with the triggering trauma as defined by the SES, showed higher SUDS scores both in anticipation of reading the passage and after reading the passage. Therefore, we can no longer say, as we have in the past, that those with triggering traumas are no more distressed by triggering passages than those without triggering traumas at least when measured by the SES. There seem to be some circumstances in which this is not the case: those with a significant sexual assault history may be significantly more distressed by a graphic passage depicting sexual assault than those without such a history. This finding bears repeating and suggests areas for future research.

It is worth noting that all students do find this type of material somewhat distressing. Participants averaged a 6.5 on an 11 point scale (our SUDS went from 0 to 10 and had the anchors of “not at all” to “extremely” distressed). A score of 6.5 would be consistent with moderate levels of distress. Those with a triggering trauma on the SES had an average score of 7.03 after the reading while those without still reported a 6.29. Therefore, all students find this type of material moderately distressing, with a slight but significant increase in those with a relevant sexual assault history.

This was the first of our studies to do what others have done previously (Bridgland et al., 2019; Bellet et al. 2020), that is, to look at possible anticipatory anxiety to this type of material. There are two findings worth noting. The first is that the SUDS scores taken right before the reading are significantly higher than the SUDS scores taken 14 days later when no reading is required. This suggests that the knowledge that they are about to read a passage about a sexual assault makes individuals more distressed than they would otherwise be. In addition, those with relevant trauma histories (as measured by the SES-SFR) have more anticipatory anxiety than those who do not. However, this interpretation is limited by the fact that on Day 1 they also complete a Life Events Checklist and the PCL-5. It is possible that the increased distress ratings may be due to the knowledge that they will be filling out a survey about their trauma history and symptoms.

**RRPQ findings**

This study also revealed RRPQ findings that we did not find in our previous studies. The RRPQ asks about participants’ reactions to engaging in a research study. We used only the Emotional Reactions Subscale of the survey measure that included questions such as “I was emotional during the research session” and “The research raised emotional issues for me that I hadn’t expected.” Using the SES, findings emerged that had not been found previously. There was a statistical trend for the RRPQ-Subscale Total Score as well as the specific item “I experienced intense emotions during the research session and/or parts of the study” in which those with assault histories on the SES reported stronger emotions to their participation in the study. Similarly, there was a significant difference on the SES variable with respect to the item “I
was emotional during the research session.” These data are suggestive that those with significant sexual assault histories are likely to find these passages more emotionally challenging than others.

**Implications**

These three studies, in combination with work from other labs in the US and abroad, have begun to produce data that can help educators, administrators, and teachers make informed decisions about whether to provide content warnings in classes.

First, students do not seem to avoid potentially triggering material when they are warned which was true even for those students with relevant trauma histories. All three studies, even the one that was limited exclusively to sexual assault, showed consistent engagement with potentially traumatic material. These data counter the narrative that trigger warnings are likely to frighten away students to the point that they might compromise education.

Second, if triggering does occur, all three studies have suggested that it is not longstanding. In all three studies, students with traumatic events did not report reexperiencing symptoms, avoidance, or hyperarousal over a 2 week period as a function of having done the reading. Administrators and teachers should not be reluctant to assign difficult material in class for fear that it might dysregulate their students over a long period of time.

Third, in the short term, the type of trauma and the type of material presented may have an impact on student distress right before the assignment and right after. The study reported here, with sexual assault participants who were reading a graphic real-life account of an assault, was the first of our studies to demonstrate an increase in distress and feeling more “emotional” during the study.

Consistent with the work of Bridgland et al. (2019) and Bellet et al. (2020), this more recent study demonstrated some evidence for anticipatory anxiety after being warned of the upcoming content. However, there are no data yet to assess whether this anticipatory anxiety due to a warning is more problematic than the alternative, namely to present the material without warning. However, there are data to suggest that students would rather be forewarned, and possibly be anxious, than to be surprised (Boysen et al., 2019)

**Limitations and Future directions**

This most recent study had limitations. The sample was from a single northeastern liberal arts institution and was fairly small. In addition, there were complete data on only 72% of the participants. It is hard to assess how drop out rates and missing data might have affected the study. Similarly, it is impossible to know who chose to participate in the study. It is possible that those with more significant sexual trauma histories did not start the study or complete it for fear of it being too upsetting, although this seems unlikely given that the SES was completed at the end of the study (on Day 14) and 32% of the females endorsed attempted or completed oral, anal, or vaginal assault.
There is continued work to be done in this area. Of top priority is a study that uses ecological momentary assessment to look at distress and recovery in the hours prior to and after having done a potentially triggering reading. While there may be no increase in PTSD-related symptoms over a 2 week period, this most recent study suggests that certain passages might increase distress soon after the passage and that the slope of recovery might look different for those with a relevant trauma. In addition, this study suggests that distress may be related to the nature of the content presented. Some material, like that presented in *The Bluest Eye*, may not be distressing in ways that the *Missoula* account was. It is possible that the fictional account of a very young adolescent from the 1940s does not engage the same level of distress as does the more modern, non-fictional account. Replication of these findings might suggest that the reading of fictional literature may be associated with fairly low-level and manageable distress and therefore instructors should not be hesitant to assign such material.

Bridgland and colleagues (2022) recently assessed whether individuals actually “use” trigger warnings to develop strategies to help them cope with upcoming material. Their early work suggests that this is not the case, but it does warrant further investigation. Finally, more precise assessments of trauma, in this case the use of the SES, seemed to reveal effects that were not as apparent with the use of the LEC. This makes sense as the SES has the capacity to separate out unwanted sexual touching from attempted and completed assaults. When assessing reactions to sexual assault material in the future, the SES should be incorporated. In addition, when possible, some indication of trauma severity would be valuable in all studies of this type rather than just a dichotomous (trauma-no trauma) assessment. It seems likely that the severity of the trauma, not just whether it happened or not, has strong bearing on how a student will respond to potentially triggering material.

**What the current science says about the use of content warnings**

When it comes to the application of clinical science to real world problems, it is almost always true that there is no one-size-fits-all approach. Even in the most reliable treatments for clinical disorders, there are individuals who are non-responders. Other times there are individuals who respond well to a treatment that wasn't really supposed to work. Therefore, the question, “Should we be giving content warnings?” is probably not the question we should be asking. As instructors who are considering issues of academic freedom at the same time as the well-being of our students, the question will often be, on a case-by-case basis, whether the benefits of a warning outweigh its costs in a particular circumstance.

There do seem to be some cornerstones that can be helpful:

- Students do not appear to use warnings “to retreat from ideas or perspectives that are at odds with their own.” (Ellison, 2016). If someone were to provide a warning, it is not likely to cause avoidance.
- Students may be distressed by reading challenging material but this does not appear to be longstanding. Even difficult readings don't seem to exacerbate PTSD.
Students may experience anticipatory anxiety after receiving a warning. The data on other benefits or drawbacks remain mixed and probably are not currently sufficient to base decisions on. The majority of students report appreciating warnings even if they don’t utilize them.

If some notice is to be given, perhaps the term “Content Warning” may be most consistent with the data. This label acknowledges the fact that all types of students, even those without trauma histories, can and do get somewhat distressed from certain content. The shift from the word “Trigger” to the word “Content” recognizes this as well as the fact that many with trauma histories aren’t actually triggered by the material. The word “Warning” (as opposed to more generic terms such as “Disclosure” or “Note”) continues to be appropriate as it acknowledges that most people do find traumatic material upsetting to read even without a personal history of trauma.

**Declarations**

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**Ethical Approval**

This research was approved by the Middlebury College Institutional Review Board which has Federal Wide Assurance Certification. The Middlebury College Institutional Review Board follows ethical guidelines laid out by the Belmont Report and updated as the Common Rule in the United States.

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**Availability of data and materials**

Anonymized data from this study may be made available upon request to the principal investigator.

**References**


**Figures**
Figure 1

PTSD Over Time in Kimble et al., 2021
Figure 2

PTSD Over Time in Kimble et al., 2022
Figure 3

SUDS before and after reading
Figure 4

PCL scores at Day 1 and Day 14