

## **The Role of Media-Induced Secondary Traumatic Stress on Perceptions of Distress**

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### **Abstract**

*The occurrence of Secondary Traumatic Stress (STS) is well documented among helping professionals working with trauma clients. These individuals, such as nurses, social workers, rescue workers and mental health counselors, are at risk to succumb to STS after repeatedly hearing or learning of others' traumas. The primary risk factor for STS is exposure to others' traumas. Empirical studies have confirmed the presence of STS in the helping professions. However, few researchers have examined whether STS can also occur in laypersons exposed to secondary trauma by media coverage. In the current study, we used a modified version of the Secondary Traumatic Stress Scale (STSS) to address this question. Our results suggest that media-induced secondary trauma predicts participant expectations of imminent distress.*

**Keywords:** distress, media, mental health counselors, secondary traumatic stress, trauma, social media.

The current study measures if a laypersons' distress (anxiety) after viewing real-world traumas via social media and television warrants the phenomenon of STS. We utilized the STSM-IQ to identify: a) if laypersons' perceptions of anxiety, as a function of STS, increase upon exposure to traumas via the media; b) if demographic variables of the individual predict perceptions of anxiety; and c) if the STSM-IQ in its entirety predicts whether viewing traumas on social media or television indicates the phenomenon of STS in the layperson. Findings indicate participants experienced anxiety subsequent to viewing others' traumas through the media. The arousal subscale of the STSM-IQ predicted perceptions of imminent distress. The construct of the STSM-IQ possesses greater ability to predict anxiety compared to each of the three subscales. When using the STSM-IQ, mental health counselors can be better equipped to gain information on the possible source of anxiety.

### **Overview**

Although trained to cope with traumatic life events, individuals employed in the helping professions are often at risk for developing secondary traumatic stress (STS). This type of stress appears as a function of not only the constant exposure to traumatic events, but also the reliving of traumas through each client's recollection of the specific traumatic life event. Research finds that the impact of another individual's traumatic story on the helping professional can result in symptoms nearly identical to those found in PTSD (Figley, 1999; Stamm, Lambert, Piland, & Speck, 2007). Unlike PTSD however, STS is not a result of directly enduring a traumatic experience but rather a phenomenon that occurs in the helping professional after he or she hears about the details of another individual's trauma. In most cases the individual is not personally known to the helping professional. Consequently, secondary traumatic stress is "becoming viewed as an occupational hazard of providing direct services to traumatized populations" (Bride, Robinson, Yegidis, & Figley, 2004, p. 27).

Despite the acknowledgement of the presence of STS in helping professionals, little research has examined whether STS can be induced in laypersons exposed to trauma depicted on the Internet, television, or social media. In the current study our research question addresses whether exposure to traumatic events through social media predicts anxiety in laypersons. Our measurement tool was adapted from the Secondary Traumatic Stress Scale (STSS: Bride, et al., 2004), modified to address this research question.

## ***The STSS – Research and Development***

According to research, the demand for a valid instrument specifically intended to measure symptoms of secondary traumatic stress in helping professionals emerged in response to a need to measure secondary traumatic stress (Bride et al., 2004). As a result, the 17-item STSS was developed and is based on the DSM-IV symptoms of PTSD (APA, 2000). The instrument demonstrated good overall reliability (Cronbach's  $\alpha = .93$ ). In addition, reliability coefficients for the three subscales (Intrusion, Avoidance, and Arousal) ranged from .80 to .87 (Bride et al., 2004). Researchers have used the STSS to study secondary traumatic stress in helping professionals working in a variety of settings. Overall, these studies have utilized the STSS for its predictive ability and/or have examined the relation between the STSS and other measurable constructs such as mindfulness and empathy (see Badger, Royse, & Craig, 2008; Setti & Argentero, 2012). For example, through a series of multiple regression analyses, Setti and Argentero (2012) found that mindfulness negatively predicted vicarious traumatization (as measured by the STSS) in a sample of firefighters. Similarly, Badger and colleagues (2008) found that occupational stress and emotional separation predicted secondary traumatic stress. Thus, it seems that in addition to examining the STSS as an outcome variable in regression models, researchers have also demonstrated the potential of specific individual difference factors to act as mediators in the context of secondary traumatic stress. In the current study we modify the STSS by rewording items to measure media-induced trauma symptoms in laypersons. Our measurement tool, the Secondary Traumatic Stress Media-Induced Questionnaire (STSM-IQ), is parallel to the STSS in its identification of symptoms of STS and PTSD and follows the criteria for PTSD outlined in the DSM-IV-TR. We also examine the ability of each subscale (re-experience, avoidance, and arousal) to predict laypersons' perceptions of imminent distress (anxiety).

## ***Media-Induced Secondary Traumatic Stress***

Social media has facilitated the world's access to graphic depictions of violent events. As a result, exposure to violent events and the subsequent feelings of distress have the potential to influence our day-to-day activities. Results of a recent study found that nearly one quarter of participants reported being significantly affected by the media's depiction of violent events (Ramsden, 2015). In addition, the amount of stress reported was related to how often they viewed the event. Media-induced PTSD has also been examined in the context of the attacks of 9/11 (Schlenger et al., 2002; as cited in Marshall, et al., 2007). The researchers utilized the PTSD Checklist (PCL; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996) to assess PTSD symptoms in a sample of 2,273 individuals. The study revealed that the number of hours an individual spent watching television reportage of the events of 9/11 was one of four significant factors of probable PTSD. They concluded that there is sufficient evidence to suggest that "indirect witnessing of the event" mediates the relation between trauma exposure and the occurrence of PTSD. Namely, repeated exposure to the event renders these individuals vulnerable to the development of chronic PTSD (p. 314). Trauma exposure and its resulting effects are far less researched among children compared to adolescents and adults. Wang, Nomura, and Pat-Horenczyk et al., (2006) investigated exposure to varying types of trauma exposure as risk factors in explaining behavioral problems in children of preschool age. Researchers found that indirect exposure to terrorism (viewing terrorism or terrorism-related events on television) on a consistent basis for five minutes or more per day rendered the children at risk for a number of problems such as becoming emotionally reactive and exhibiting oppositional defiance. This research demonstrates the similarities that can be drawn between children and adults with respect to the effects of media-induced trauma.

## ***Secondary Traumatic Stress Media-Induced Questionnaire (STSM-IQ)***

It is clear from a review of the literature that a need exists for a measure that can capture individuals' susceptibility to secondary traumatic stress as a function of exposure to traumas through various forms of media. As a result, in the current study we introduce the Secondary Traumatic Stress Media-Induced Questionnaire (STSM-IQ), a modified STSS, designed to measure secondary traumatic stress in laypersons. The STSM-IQ is parallel to the STSS in its identification of symptoms of STS and PTSD in that it follows the criteria for PTSD outlined in the DSM-IV-TR. The purpose of the STSM-IQ is to determine if secondary traumatic stress occurs in the layperson after exposure to repeated real life traumas through social media.

## ***The Current Study***

In the current study we use the STSM-IQ to measure layperson perceptions of imminent distress (anxiety) by addressing three research questions:

- the ability of each sub-scale (avoidance, arousal, and re-experience) of the STSM-IQ to predict laypersons' perceptions of imminent distress (anxiety);
- whether specific variables (i.e., age, education, exposure to the media) predict perceptions of anxiety; and
- Whether the STSM-IQ in its entirety predicts our outcome variable.

## **Method**

### **Participants**

One hundred twenty-eight individuals participated in our online survey. A power analysis was conducted using G\*Power 3. The calculated sample size was sufficient considering three predictor variables and an Observed  $R^2 = .30$  (Faul, Erdfelder, Buchner, & Lang, 2009). Participants consisted of an anonymous sample of students, staff, faculty, and alumni of a private university located in the New England area. Participants ranged in age from 18-65 with 67% between 18-35. Twenty-one respondents indicated that they were trained to work with survivors. Refer to Figure 1 for frequency distribution of responses to our outcome variable: "In the past seven (7) days, I expected something bad to happen" for participants with training experience v. those without. With respect to education, 59% indicated they were undergraduates, 36% indicated post-graduate education level. Participants were asked to assess how often they relied on news media for information about world events: 45% indicated 1-3 hours/week; 30% 4-8 hours; and 22% 9 or more hours. All respondents were anonymous and encrypted to ensure anonymity. Participants were recruited via a periodic university news brief inviting individuals to participate in the survey as well as through email requests for participation. After indicating consent, participants were directed to the online study. Participation took approximately twenty minutes.

### **Instrument**

The survey instrument used in this study was the Secondary Traumatic Stress Media-Induced Questionnaire (STSM-IQ). We adapted this instrument from the STSS, the original tool used to measure secondary traumatic stress. The STSM-IQ is composed of 22 items. Six items are informational/demographic, 8 items are identical to the STSS, and in the remaining 8 items the terminology was altered from identifying the clinicians' work with clients' traumas to the "trauma seen on television or social media". We altered the language in order to depict laypersons' emotional responses to world traumas as a function of exposure to media. See Appendix for full version of the STSM-IQ.

### **Procedure**

The procedure for data collection utilized two Internet-based methods. The first method involved a short introduction and a link to the survey, which was posted in a news brief on the university's news media source. The second collection method was an emailed invitation to participate in an interactive survey. The survey was posted for 14 days.

## **Results**

### **Internal Consistency**

Internal consistency was assessed on 15 items<sup>1</sup> assessing secondary traumatic stress as part of the STSM-IQ. Results indicated Cronbach's Alpha = .90. Similar to the STSS, the STSM-IQ contains three sub-scales (avoidance, arousal, and re-experience). Reliability coefficients were calculated for the three sub-scales of the STSM-IQ. Results were as follows: Cronbach's Alpha = .78 for 6-item Avoidance sub-scale, .81 for the 5-item Arousal sub-scale, and .77 for the 4-item Re-experience sub-scale. Tables 1-3 display analysis of each of the sub-scales in relation to DSM-IV criteria.

### **Research Questions**

Independent samples *t*-test revealed no significant differences on our outcome variable between participants with training v. those without ( $M_{Training} = 2.19$  v.  $M_{No Training} = 2.14$ ;  $p = .86$ ). However, in order to accurately test our research questions, we limited our statistical analyses to individuals with no reported training with trauma survivors. First, to examine the predictive utility of each of the sub-scales of the STSM-IQ on individuals' perceptions of imminent distress we performed a linear regression analysis. The outcome variable was a linear measure of participants' responses to the following item:

<sup>1</sup> We did not include our outcome variable as part of the internal consistency assessment.

“In the past seven days, I expected something bad to happen”. For the purposes of this study this statement is the operational definition we chose from the constructs of “imminent distress” and “anxiety”, which are used synonymously. We also utilized the response scale depicted in the STSS in which responses were scaled as 1 = never to 5 = very often.

### **Linear Regression**

The Model was significant:  $F(3, 93) = 24.26, p < .001; R^2 = .44$ . The Arousal sub-scale explained 4% of the Model's variability: ( $\beta = .337, p = .008$ ). The Re-experience sub-scale approached significance: ( $\beta = .192, p = .085$ ) and explained an additional 2% of the variability. The avoidance sub-scale did not significantly predict our outcome variable. Secondly, using regression analysis we explored whether and to what extent specific variables (age, education, exposure to the media) predicted perceptions of imminent distress. The Model was not significant:  $p = .266$ . The variables chosen for this analysis did not predict our dependent measure.

Finally, in order to investigate the predictive ability of the STSM-IQ in its entirety on anxiety we performed a linear regression. In order to conduct this analysis, we first summed participants' responses on the scale. We did not include our outcome variable in our summation. The results indicated the following:  $STSM-IQ_{MIN} = 15.00, STSM-IQ_{MAX} = 69.00, M = 32.21, Md = 31.00$ . The Model was significant:  $F(1, 95) = 73.46, p < .001, R^2 = .44$ . The STSM-IQ scale in its entirety explained all of the Model's variance: ( $\beta = .660, p < .001$ ). Thus, it appears that at least with respect to our sample, the construct of STSM-IQ (as a complete scale) possesses greater ability to predict anxiety compared to each of the three sub-scales.

### **Discussion**

In the current study we assessed whether the STSM-IQ predicted individuals' perceptions of imminent distress as a function of exposure to social media. We conceptualized this research question from literature that points to the efficacy of the STSS in identifying secondary traumatic stress among mental health professionals in varying settings. As a result, we modified the scale to address secondary traumatic stress among laypersons in the context of social media. Due to the relative dearth of literature examining the predictive ability of each of the sub-scales (avoidance, arousal, and re-experience) of the STSS, we expanded our research question to address this concern in the newly developed STSM-IQ. Our results revealed that while the arousal sub-scale predicted individuals' perceptions of imminent distress (anxiety), it explained very little of the model's variability. However, the STSM-IQ in its entirety, explained all of the model's variance. We consider this an important finding as well as a valid starting point for continued examination of the STSM-IQ.

### **Findings and Support**

As evidenced in our review of the literature, researchers have utilized the STSS as both a predictor and an outcome variable in different contexts. Our intent in presenting this research was not only to demonstrate the versatility of the STSS, but also to provide a framework for the conceptualization of the STSM-IQ. For example, research has demonstrated that secondary traumatic stress can occur in children identified as primary caregivers (Gwandure, 2007). In this study, the STSS provided a mechanism for the children's teachers and family members to understand the symptoms experienced by the children. In similar fashion, the STSM-IQ can be useful in gaining a better understanding of the impact of exposure to others' traumas via social media on perceptions of distress. This is particularly noteworthy in lieu of Wang, et al., (2006), who demonstrated that electronic media caused symptoms of anxiety in preschoolers who viewed at least five minutes per day of terrorism. Our findings, albeit preliminary, echo other researchers who conclude that mechanisms to provide psychological support should be offered to individuals experiencing secondary traumatic stress through social media, especially children.

While there doesn't seem to be an amateur definition of “secondary traumatic stress”, it appears to be a term reserved for the helping professional. We suggest expanding this term to be universal and include laypersons in addition to those in the helping professions. We offer this suggestion based on our observation that laypersons vicariously exposed to trauma through media endorsed at least one trait of secondary traumatic stress after viewing another's trauma through media. This finding also supports Marshall, et al., (2007) who suggests that “indirect witnessing of the event” can likely facilitate the occurrence of PTSD. Results indicated that nearly one quarter of participants reported being significantly affected by the media's depiction of the events. In addition, the amount of stress reported was related to how often they viewed the event. The researchers concluded that caution should be taken with respect to the risk associated with viewing this type of violence through social media.

### **Limitations and Future Research**

In the current study we examined laypersons' anxiety response to viewing traumatic events on the Internet, in social media, and on television. The sample was composed primarily of undergraduate students from a private university in New England. The study's design utilized an anonymous survey to collect self-report data of individual perceptions of safety and anxiety after viewing traumatic events on television or the Internet. Our findings indicate that laypersons experience an increase in anxiety after exposure to traumas via the media. It should be noted that most participants did not experience secondary traumatic stress to a degree in which symptomology of PTSD was a concern. With that said, we acknowledge some limitations listed as follows: First, the study did not include a screening component designed to detect the presence of trauma in the participants' history. With the realization that the symptoms of secondary traumatic stress for the most part, mirror the symptoms of PTSD, it is highly probable that a PTSD survivor would endorse symptoms of secondary traumatic stress in our study. If this were the case, we had no mechanism in place to isolate this factor in order to examine its separate effects.

A prescreening question that addresses prior exposure to trauma or a history of being diagnosed with PTSD would allow for further scrutiny and minimize the potential for a rival hypothesis. Secondly, the limited number of demographic items assessed as well as the size of our sample restricted the generalizability of our findings. We also believe sample size was an important factor in the limited predictive utility of the re-experience sub-scale. With a more diverse sample, perhaps the isolated effects of each of the sub-scales will emerge. Future studies should include a more complete set of demographic variables as well as assessments of the level of support individuals have to assist in coping with traumatic events. Assessing participants' ability to utilize relaxation and awareness methods such as mindfulness or mental and physical relaxation techniques is useful in this context. If these coping skills were present, the likelihood of endorsing secondary traumatic stress symptoms may be reduced. Finally, a larger, more heterogeneous sample will allow for more in-depth analysis of the role of the three sub-scales on perceptions of distress.

The research has also begun to examine the role of certain individual difference variables in the context of secondary traumatic stress. For example, one's ability to emotionally separate from the therapeutic relationship has been found to decrease secondary stress in social workers (Badger, et al., 2008). Similarly, mindfulness was observed to negatively predict vicarious traumatization (as measured by the STSS) in a sample of firefighters (Setti & Argentero, 2012). These factors are just a few of the many potential mediating factors that can be investigated within the existing paradigm. Researchers may also consider using the STSM-IQ in different paradigms. For example, an interesting empirical question might address how participants respond to imminent distress after exposure to varied levels of violence via social media. This type of study would yield causal conclusions, producing more in-depth discussions of how to treat media-induced stress. We are confident that future researchers will find that the STSM-IQ a useful tool in identifying secondary traumatic stress as a function of exposure to the media. As a first study, we hope our findings lead to continued research to validate the STSM-IQ and offer interesting and inspiring uses of this modified scale.

### **Conclusion**

The STSM-IQ may prove to be a valuable tool for today's counselor however further studies must first be completed. Just as the STSS is a valuable tool to assess the presence of STS in the helping professional, the STSM-IQ is also a valuable counselor tool and can assess if a client has a vicarious traumatic reaction of fearing something bad is about to happen. Consider the anxious client who now endorses the PTSD DSM-5 symptom of "negative alteration in cognitions": the STSM-IQ may reveal the source of the client's perception of *something bad will happen* as a result of secondary exposure to traumas on media, rather than direct, in-person trauma exposure. Counselors and helping professionals who clearly know the difference between PTSD and STS can better direct an appropriate treatment plan for the non-PTSD client and the STSM-IQ can assist.

Trends for brief therapy and the restrictions enforced by managed care organizations limit both treatment interventions and the number of allowed sessions. As a result, counselors must rapidly provide a provisional diagnosis on the first visit. Counselors may now use the STSM-IQ to rapidly assess the possibility of media viewed traumas as the source of the client's perception that *something bad will happen*. The data obtained by counselors through the administration of the STSM-IQ has the potential to prevent the over diagnosing of PTSD and the under treatment of anxieties due to environmental psychosocial stressors, especially in children.

The STSM-IQ may be utilized as an initial or subsequent information-gathering tool and in turn may provide data for the counselor to educate the client on STS in the layperson. The counselor who uses the STSM-IQ will also gain further awareness of the effects of STS in the laypersons, thus will provide more effective treatment and treatment planning and expedite an efficient course of treatment.

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**Table 1: Analysis of Avoidance sub-scale items (N = 100)**

Item # and characteristics*	DSM-IV – TR† Criterion
6. A lack of feeling or feeling “numb”	C6
10. A sense of fore-shortened future	C3
12. Symptoms of detachment and estrangement	C5
14. Diminished interest/participation in significantactivities	C4
17. Efforts to avoid people, places or things that arouserollection of the trauma	C2
19. Efforts to avoid thoughts, feelings or conversationsassociated with the trauma	C1

Note: Cronbach’s alpha = .78. \*Refers to the negative effects of traumatic stress.†TR – text revision

**Table 2: Analysis of Arousal sub-scale items (N = 103)**

Item # and characteristics*	DSM-IV – TR† Criterion
7. Frequency of somatic reaction of heart pounding	Panic
9. Insomnia	D1
13. Exaggerated startle response	D5
16. Difficulty with concentrating	D3
20. Irritability and outbursts of anger	D2

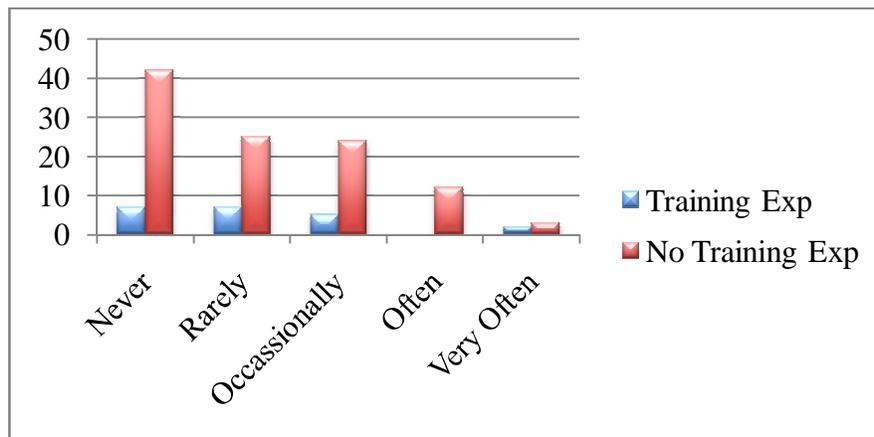
Note: Cronbach’s alpha = .81. \*Refers to the negative effects of traumatic stress.†TR – text revision

**Table 3: Analysis of Re-experience sub-scale items (N = 102)**

Item # and characteristics*	DSM-IV – TR† Criterion
8. Reliving others’ traumas	B3
11. Traumas cue recollection of trauma	B3 and B4
15. Intrusive and distressing recollections of trauma	B1
18. Recurrent distressing dreams of the event(s)	B2

Note: Cronbach’s alpha = .77. \*Refers to the negative effects of traumatic stress.†TR – text revision

**Figure 1: Differences in responses to “In the past seven (7) days I expected something bad to happen” between number of individuals with training versus without training.**



Note: n = 21 participants with training; n = 106 participants without training.

## Appendix

### Secondary Traumatic Stress in Everyday Living Questionnaire<sup>2</sup>

#### Confidentiality Notice

By clicking on the link to this survey you are giving your voluntary consent to participate in this survey. You will remain anonymous. The results will be discussed in aggregate form. Thank you in advance, for participating in this study.

After reading each item, please check the box that most closely resembles you.

1. How old are you?
  - 18-25
  - 26-35
  - 36-45
  - 46-55
  - 56-65
  - 66-75
  - 76-85
  - 86 and older
2. Are you trained to work with survivors of traumas and have you worked with trauma survivors?
  - Yes
  - No
3. What is your level of education?
  - Undergraduate level
  - Graduate level
  - High school/GED level
  - Trade School, Certification
  - Less than 12<sup>th</sup> grade
4. How many hours per week are you exposed to the news or learning about world events?
  - 0 hours, rarely, or maybe every other week
  - 1-3 hours a week
  - 4-8 hours a week
  - 9 or more hours a week
5. From which source do you mostly get your information about world events?
  - Radio (Satellite, Public Radio, FM/AM etc.)
  - Television (at home, in waiting rooms, lobbies, terminals, stores, vehicles/airplanes/buses, restaurants, or any other public place)
  - Paper media (newspapers, magazines, articles, brochures, etc.)
  - Mobile tools (iPod or Smartphone or cell phones w/Internet access)
  - Internet
- 6Δ. In the past SEVEN (7) days, after being exposed to others' real-life trauma(s) on television and/or through social media, I felt emotionally numb:
  - Never
  - Rarely
  - Occasionally
  - Often
  - Very often
- 7Δ. In the past SEVEN (7) days, after being exposed to others' real-life trauma(s) on television and/or through social media, my heart started pounding:
  - Never
  - Rarely
  - Occasionally
  - Often
  - Very often

<sup>2</sup> This title was used for research purpose.

8Δ. In the past SEVEN (7) days, after being exposed to others' real-life trauma(s) on television and/or through social media, it seemed as if I were reliving their trauma:

- Never
- Rarely
- Occasionally
- Often
- Very often

9†. In the past SEVEN (7) days, I had trouble sleeping:

- Never
- Rarely
- Occasionally
- Often
- Very often

10†. In the past SEVEN (7) days, I felt discouraged about the future:

- Never
- Rarely
- Occasionally
- Often
- Very often

11Δ. In the past SEVEN (7) days, reminders of the real-life traumas that I was exposed to through social media and/or television upset me:

- Never
- Rarely
- Occasionally
- Often
- Very often

12†. In the past SEVEN (7) days, I had very little interest in being around others:

- Never
- Rarely
- Occasionally
- Often
- Very often

13†. In the past SEVEN (7) days, I felt jumpy:

- Never
- Rarely
- Occasionally
- Often
- Very often

14†. In the past SEVEN (7) days, I was less active than usual:

- Never
- Rarely
- Occasionally
- Often
- Very often

15Δ. I thought about the real-life traumas I was exposed to through social media and/or television when I didn't intend to:

- Never
- Rarely
- Occasionally
- Often
- Very often

16†. In the past SEVEN (7) days, I had trouble concentrating:

- Never
- Rarely
- Occasionally
- Often
- Very often

17Δ. In the past SEVEN (7) days, I avoided people, places, or things that reminded me of the real-life trauma(s) I was exposed to through social media and/or television:

- Never
- Rarely
- Occasionally
- Often
- Very often

18Δ. In the past SEVEN (7) days, I had disturbing dreams about the real-life trauma I was exposed to through social media and/or television:

- Never
- Rarely
- Occasionally
- Often
- Very often

19Δ. In the past SEVEN (7) days, I wanted to avoid more real-life trauma exposure from television and/or social media:

- Never
- Rarely
- Occasionally
- Often
- Very often

20†. In the past SEVEN (7) days, I was easily annoyed:

- Never
- Rarely
- Occasionally
- Often
- Very often

21†. In the past SEVEN (7) days, I expected something bad to happen:

- Never
- Rarely
- Occasionally
- Often
- Very often

22. Which United States region do you call home?

- Northeast
- Southeast
- Midwest
- Southwest
- West
- Outside the US

† Indicates items adapted from the STSS.

Δ Indicates items in which language was either included or substituted to reflect trauma induced through social media.