

**FEELING PRESSURED TO TALK ABOUT TRAUMA: HOW PRESSURE TO  
DISCLOSE ALTERS THE ASSOCIATION BETWEEN TRAUMA DISCLOSURE AND  
POSTTRAUMATIC GROWTH**

by

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by Claire Kimbley in partial fulfilment of the requirements  
for

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### **Abstract**

Talking with others about traumatic experiences (i.e., trauma disclosure) has been associated with increased posttraumatic growth. While this association indicates the value of disclosing, there is evidence that external pressure to disclose can hinder the benefits of trauma disclosure. The aim of the current study was to examine the influence of pressure to disclose on the association between trauma disclosure and posttraumatic growth. People who had experienced a traumatic event and had disclosed their trauma to a close other were recruited from Amazon's Mechanical Turk ( $n = 208$ ). Participants completed measures of traumatic experiences, trauma disclosure, pressure to disclose, posttraumatic growth, posttraumatic stress symptoms, and responses to disclosure. Results indicated that the linear association between trauma disclosure and posttraumatic growth was quadratically moderated by pressure to disclose. Pressure to disclose strengthened the positive association between trauma disclosure and growth from low to moderate levels of pressure. However, increasing from moderate to high pressure weakened the association between disclosure and growth. These findings indicate that a moderate amount of pressure to disclose may facilitate the positive impact of disclosure on posttraumatic growth; yet a high amount of pressure may impede disclosure's positive association with growth. This research furthers our understanding of the nuance of trauma disclosure and how the involvement of close others in trauma disclosures can impact the process of posttraumatic growth for trauma survivors.

### **Lay Summary**

People who have experienced trauma and have talked to others about their experience tend to have greater posttraumatic growth. Posttraumatic growth is the transformation in ways of feeling, thinking, and behaving that can occur after a traumatic event. While talking to others about a traumatic event can be beneficial, it is unclear how talking with others can sometimes be ineffective or harmful for posttraumatic growth. The purpose of this research was to investigate how pressure from close others to talk about a traumatic event can impact a person's posttraumatic growth. The findings indicate that a moderate level of pressure from close others is helpful to posttraumatic growth, whereas high levels of pressure from close others can be unhelpful to or impede posttraumatic growth.

## **Preface**

This thesis is original, unpublished, independent work by the author, Claire T. Kimbley, and supervised by Dr. Daniel W. Cox. The research was approved by the UBC Research Ethics Board under the certificate number H20-01309.

## Table of Contents

<b>ABSTRACT .....</b>	<b>iii</b>
<b>LAY SUMMARY .....</b>	<b>iv</b>
<b>PREFACE .....</b>	<b>v</b>
<b>TABLE OF CONTENTS .....</b>	<b>vi</b>
<b>LIST OF TABLES.....</b>	<b>vii</b>
<b>LIST OF FIGURES.....</b>	<b>viii</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>ix</b>
<b>CHAPTER 1: INTRODUCTION .....</b>	<b>1</b>
POSTTRAUMATIC GROWTH.....	1
TRAUMA DISCLOSURE AND POSTTRAUMATIC GROWTH.....	2
PRESSURE TO DISCLOSE .....	3
PRESENT STUDY .....	4
<b>CHAPTER 2: METHODS.....</b>	<b>6</b>
PARTICIPANTS AND PROCEDURE .....	6
MEASURES.....	7
<i>Descriptive Measures.....</i>	<i>7</i>
<i>Primary Measures.....</i>	<i>7</i>
<i>Covariate Measures.....</i>	<i>9</i>
<i>Response Validity.....</i>	<i>10</i>
ANALYSES .....	10
<b>CHAPTER 3: RESULTS.....</b>	<b>11</b>
PRELIMINARY ANALYSES .....	11
PRIMARY ANALYSES .....	12
<i>Pressure to Disclose as a Moderator.....</i>	<i>13</i>
<i>Trauma Disclosure as a Moderator.....</i>	<i>14</i>
<b>CHAPTER 4: DISCUSSION.....</b>	<b>15</b>
THE MODERATING EFFECT OF PRESSURE TO DISCLOSE .....	15
DISCLOSURE AS MODERATOR .....	17
IMPLICATIONS FOR PRACTICE.....	18
LIMITATIONS AND FUTURE DIRECTIONS .....	19
<b>TABLES AND FIGURES.....</b>	<b>20</b>
<b>REFERENCES .....</b>	<b>25</b>
<b>APPENDIX: PRESSURE TO DISCLOSE SCALE (PDS).....</b>	<b>33</b>

**List of Tables**

Table 1	Descriptive statistics and correlations for primary variables.....	21
Table 2	Hierarchical regression analyses predicting posttraumatic growth .....	22

### List of Figures

Figure 1	Participant flow.....	23
Figure 2	Moderation of the association of disclosure and posttraumatic growth by pressure to disclose.....	24
Figure 3	Moderation of the association of pressure to disclose and posttraumatic growth by disclosure.....	25



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## Chapter 1: Introduction

Trauma disclosure has been associated with improved posttraumatic outcomes, such as increased posttraumatic growth (e.g., Hassija & Turchik, 2016). However, external forces that impede trauma survivors' sense of control and empowerment over their trauma-related experiences—such as pressure from others to disclose—can lead to attenuated recovery (O'Donnell et al., 2020; Rose et al., 2002; van Emmerik et al., 2002). Consequently, our study aimed to investigate the association between pressure to disclose, trauma disclosure, and posttraumatic growth. In particular, we tested the hypothesis that pressure to disclose impedes (i.e., moderates) the association between trauma disclosure and posttraumatic growth.

### Posttraumatic Growth

Posttraumatic Growth occurs when people experience positive transformation in their ways of thinking, feeling, and behaving following traumatic events (Tedeschi et al., 2018). Five areas of posttraumatic growth have been identified: personal strength, relating to others, spirituality, appreciation for life, and identification of new possibilities (Tedeschi & Calhoun, 1996). Posttraumatic growth has been linked with increased positive mental health, reduced negative mental health, and improved subjective physical health (Sawyer et al., 2012). Greater posttraumatic growth has also been associated with greater resilience, more adaptive coping strategies, and favourable attitudes towards help seeking (Drapeau et al., 2019; Levi-Belz et al., 2021).

Growth triggered by trauma has been explained as resulting from challenges and changes to people's assumptive world, as traumatic occurrences initiate cognitive processing and the reconstruction of beliefs to make sense of events within people's lives. Evidencing the importance of cognitive processing for posttraumatic growth, several researchers have reported

positive associations between intentionally thinking about traumatic experiences and posttraumatic growth (Castro et al., 2019; Dong et al., 2015; Ramos et al., 2018). Further, posttraumatic responses that impede processing, such as avoidance, have been found to be negatively associated with posttraumatic growth (Hagenaars & van Minnen, 2010).

One way that people process their traumatic experiences is through disclosing their experiences and reactions to others (Sloan & Marx, 2004; Bedard-Gilligan et al., 2012). Disclosing trauma-related experiences to others facilitates deliberate thinking and the challenging of beliefs (Cann et al., 2011; Linley & Joseph, 2011; Morris & Shakespeare-Finch, 2011; Tedeschi et al., 2018). The more people disclose, the more deliberate thinking and belief challenging they engage in about their traumatic experiences (Dong et al., 2015; Ramos et al., 2018). Further, the more detailed, insightful, and extensive the disclosures are, the less posttrauma symptoms are experienced and the better the outcomes are for disclosers, demonstrating the utility of trauma-related disclosure for facilitating trauma processing (Pennebaker, 1997; Pennebaker et al., 1997; Pérez et al., 2017; Ullman, 1996; Ullman & Filipas, 2005).

### **Trauma Disclosure and Posttraumatic Growth**

Consistent with the research indicating disclosure facilitates processing, there is evidence that disclosure facilitates posttraumatic growth via the facilitation of processing. Studies looking at both informal and formal disclosures of sexual trauma found a positive association between disclosure and self-perceived posttrauma benefits (Borja et al., 2006), as well as finding a meaningful association between degree of disclosure and posttraumatic growth (Hassija & Turchik, 2016). Further, disclosure has been associated with growth in cross-sectional and longitudinal studies (Cordova et al., 2001; Pietruch & Jobson, 2012; Levi-Belz et al., 2021; Taku

et al., 2009; Taku et al., 2021). Consistent with processing theory, researchers have observed that the narrative coherence of trauma disclosures is associated with posttraumatic growth, the higher the narrative coherence, the higher the posttraumatic growth (Jirek, 2017). This finding indicates that the processing of trauma and production of a trauma narrative through disclosure fertilizes areas of growth for trauma survivors.

In addition to trauma disclosures being related to posttraumatic growth, how others respond to disclosures has also been linked with growth; with positive responses being associated with more growth and negative responses with less (Taku et al., 2009). This link between others' responses and growth indicates that the interpersonal context in which disclosures occur also influences the growth processes that stem from disclosures. This link between responses to disclosures and posttraumatic outcomes is consistent with research on posttraumatic stress disorder (PTSD) and disclosure in which negative responses to trauma disclosure have been associated with more PTSD symptoms (Edwards et al., 2015; Ullman & Peter-Hagene, 2014) and positive responses have been associated with less PTSD symptoms (DiMauro and Renshaw, 2021).

### **Pressure to Disclose**

While trauma disclosure has been linked with growth and other desired posttraumatic outcomes, external pressure to disclose may impede this association. Some formal and potentially pressured disclosures (e.g., trauma debriefing) have come into question due to concerns that they are not effective (e.g., Rose et al., 2002) and may even be harmful (e.g., van Emmerik et al., 2002). Further, in response to concerns about pressured posttraumatic treatments, practice guidelines for psychosocial interventions following traumatic events include statements warning against formal interventions being indiscriminately mandated to all who have

experienced traumas, as trauma survivors should have control over their participation (Bisson et al., 2007; O'Donnell et al., 2020).

In contrast to trauma disclosures where there is substantial pressure to disclose, disclosures in which there is little or no pressure may provide the trauma survivor with a sense of control over their narrative and over their recovery. For these reasons, current trauma-informed practice frameworks often emphasize the importance of empowerment and choice when working with those who have experienced trauma (e.g., Knight, 2018). Empirically, having greater perceived control over posttrauma recovery has been associated with less posttrauma distress (Frazier et al., 2005), greater posttrauma adjustment (Frazier et al., 2004), and fewer negative social responses (Frazier et al., 2011; Ullman et al., 2007). Collectively, these conceptual and empirical links between trauma disclosure, pressure to disclose, and posttraumatic outcomes indicate the importance of better understanding how to facilitate disclosure in ways that potentiate—and do not impede—posttraumatic growth.

### **Present Study**

Trauma disclosure has been positively associated with improved posttraumatic outcomes, such as greater posttraumatic growth (e.g., Slavin-Spenny et al., 2011). Yet, trauma disclosures that occur as a result of pressure from others may lead to more negative outcomes for trauma survivors (O'Donnell et al., 2020; Rose et al., 2002). It is unclear whether pressure to disclose impedes (i.e., moderates) the association between trauma disclosure and posttraumatic growth. Therefore, in the present study we investigated the association between trauma disclosure, pressure to disclose, and posttraumatic growth. To better understand the effect of pressure to disclose, we examined if pressure to disclose moderates the association between trauma disclosure and posttraumatic growth.

Our specific hypotheses were: (H1) The greater the trauma disclosure, the greater the posttraumatic growth, (H2) the greater the pressure from another person to disclose, the lower the posttraumatic growth, and (H3) there will be a significant interaction between disclosure and pressure to disclose, in that pressure to disclose will moderate the association between disclosure and posttraumatic growth. More specifically, as pressure increases, the association between disclosure and growth will decrease.

## Chapter 2: Methods

### Participants and Procedure

Participants were recruited through Amazon's Mechanical Turk (MTurk; <https://mturk.com>). MTurk is an online crowdsourcing tool where users (i.e., workers) can complete tasks in exchange for monetary compensation. The study was advertised as a study of past stressful experiences and talking to others about those past experiences. Inclusion criteria included being 19 years or older, having experienced a traumatic event within the last three years, and having talked to at least one other person about the event. Participants were compensated with \$2.50 USD. The study concluded with 317 participants completing the questionnaire. After reviewing responses for study requirements and validity, we ended with a sample size of 208 participants (see results section for detailed explanation of exclusion process).

Of those who met the inclusion criteria ( $n = 208$ ), 33.7% identified as women and 66.3% as men; the mean age was 37.6 years ( $SD = 10.91$ ), with a range of 19 to 74. Most of the sample was Caucasian/White (72.6%), followed by African American/Black (14.9%), and Hispanic (7.2%). Over 72% of the sample had a household income of \$40,000 or above. The index traumas indicated by participants were natural disaster or fire (19.7%), transportation or other accident (23.5%), physical or sexual assault (10.7%), life threatening illness or injury (16.3%), sudden death of another person (16.3%), and other traumas (13.4%). Further, 44.7% of the sample scored 31 or above on the PTSD Checklist, indicating probable PTSD (Blevins et al., 2015).

Following the participants consenting to participate in the study and completing the demographic questionnaire, they completed a trauma-event measure where they identified their index traumatic event. Next, they identified the people they had disclosed to and selected from

those people who they were closest with (i.e., their close other). When completing subsequent measures about disclosure, participants were instructed to respond in reference to disclosing the trauma they identified and disclosing to the close other they identified. The close other participants disclosed to were most often partners, spouses, or significant others (43.8%); followed by family members (28.8%); and close friends (20.7%).

## **Measures**

### ***Descriptive Measures***

**Traumatic event.** The Extended Life Events Checklist (LEC-5; Weathers, Blake, et al., 2013) was used to measure the occurrence of traumatic events. This measure asks respondents to indicate whether they had experienced 16 specific traumatic events, with an additional option to select “other” trauma and further describe that alternative experience. Follow-up questions were also included so participants could identify the worst event they experienced, which is referred to as their index traumatic event. Respondents were instructed to complete measures of posttraumatic growth, trauma disclosure, pressure to disclose, and responses to disclosure in reference their index traumatic event.

**Demographics.** Our self-report demographic questionnaire included items assessing age, gender, and racial or ethnic background.

### ***Primary Measures***

**Posttraumatic growth.** The expanded Posttraumatic Growth Inventory (PTGI-X; Tedeschi et al., 2017) was used to assess posttraumatic growth. The measure contains items that assess five areas of posttraumatic growth: personal strength, spirituality, connection with others, appreciation for life, and realizing new possibilities. Participants indicated the extent to which they experienced each of the 25 items, from 0 (*I did not experience this change as a result of my*



*crisis*) to 5 (*I experienced this change to a very great degree as a result of my crisis*). The PTGI has previously demonstrated good reliability and validity (Taku et al., 2008). In the current sample the PTGI-X total score had good internal consistency (Cronbach's  $\alpha = 0.97$ ).

**Trauma disclosure.** The Communication about Stressful Experiences scale (Allen & Renshaw, 2015) was used to determine the degree to which participants disclosed to another person about the traumatic event they experienced. The instructions that accompanied the scale were modified to ask about any trauma experience (rather than solely sexual assault experiences) and about disclosure to a close other (rather than solely to a partner). Participants were asked to respond to 8 items, indicating the extent to which they discussed various aspects of their experiences with another person, from 0 (*not at all*), to 6 (*a great deal*). This scale has demonstrated adequate internal consistency in previous studies (DiMauro & Renshaw, 2021). The Communication about Stressful Experiences scores showed good internal reliability in the current sample ( $\alpha = 0.84$ ).

**Pressure to disclose.** The five-item, self-report, researcher-created Pressure to Disclose Scale (PDS), was designed to measure the pressure people experienced from another person to talk about their traumatic experience. Items were modeled after existing psychometrically sound measures of autonomy that assessed external pressure or lack of control over one's behaviors (Deci et al., 2006; Sheldon & Hilpert, 2012). The PDS included items that assessed general pressure to disclose (e.g., "I talked about my experience with them because they pressured me to do so") and pressure to disclose specific aspects of the trauma ("They pressured me to talk about details related to my experience that I did not want to discuss"; see Appendix). Response options ranged from 0 (*not at all*) to 6 (*a great deal*). In the current sample internal consistency was high ( $\alpha = 0.97$ ) and the measure correlated in expected directions with PTSD ( $r = .852, p < .001$ ),

positive responses to trauma disclosure ( $r = -.322, p < .001$ ), and negative responses to disclosure ( $r = .861, p < .001$ ).

### ***Covariate Measures***

**PTSD symptoms.** The PTSD Checklist for DSM-5 (PCL-5; Weathers, Litz, et al., 2013) was used to measure posttraumatic stress symptom severity. The PCL-5 consisted of 20 items that correspond to DSM-5 criteria for PTSD. Participants indicated how bothered they have been by each of the symptoms with a rating on a 5-point scale, ranging from 0 (*not at all*) to 4 (*extremely*). Items were summed for a total severity score. The PCL-5 is a psychometrically sound measure of PTSD symptom severity (Blevins et al., 2015). Presently, the Cronbach's alpha for the PCL was 0.98.

**Responses to disclosure.** The Partner Response to Disclosure scale (Allen & Renshaw, 2015) was used to assess perceptions of close others' positive and negative responses to trauma disclosure. The instructions were modified to ask about (a) any trauma experience (rather than sexual assault experiences exclusively), and (b) disclosure to a close other (rather than solely to a partner). Response options ranged from 0 (*strongly disagree*) to 6 (*strongly agree*). The measure's validity has been indicated via directionally consistent correlations with hostility, relationship satisfaction, and PTSD symptoms (DiMauro, 2017). The internal consistency of the measure in past samples is also considered adequate (DiMauro & Renshaw, 2021). Consistent with prior use of the measure (DiMauro & Renshaw, 2021), we separated the positive and negative items into a positive subscale and negative subscale. Further, confirmatory factor analysis of our data indicated that a two-factor solution was a better fit than a one-factor solution ( $\Delta \chi^2(1) = 143.895, p < .0001$ ). A sample item from the positive response scale is, "They were very accepting and supportive when we talked about this," and a sample item for the negative

response scale is, “They seemed to blame, doubt, judge, or question me about this experience.”

Both positive and negative response scales showed good internal reliability in the current sample ( $\alpha = 0.84$ ;  $\alpha = 0.94$ ).

### ***Response Validity***

We took several steps to assure the validity of responses. Participation in the study was restricted to workers who had at least a 95% approval ratio on the MTurk platform. The participant’s stated country location was cross-referenced with their IP address to confirm accurate responding. Participants also completed several questions to assess if they were paying attention. For example, including items where participants were asked to select a specific response option to ensure they were reading the questions and answering accordingly (e.g., “Respond to this question by selecting Somewhat disagree”).

### ***Analyses***

Multiple regression was used to examine direct effects and interactions. With posttraumatic growth as the dependent variable, we examined (a) the direct effect of trauma-related disclosure, (b) the direct effect of pressure to disclose, and (c) the interaction between disclosure and pressure to disclose. We controlled for three variables that are theoretically related to posttraumatic growth: PTSD symptom severity, positive responses to disclosure, and negative responses to disclosure. We controlled for PTSD symptom severity because PTSD’s positive association with growth has been explained via the difficulties inherent in PTSD facilitating challenges and changes to people’s assumptive world, which facilitates growth. We controlled for responses to disclosure by close others, as interpersonal responses that are perceived as positive can facilitate growth, whereas those responses perceived as negative can deter growth. Data was analyzed with SPSS and all predictor variables were mean centered.

## Chapter 3: Results

### Preliminary Analyses

First, data were screened for missing or invalid responses, and these participants were accordingly removed from the data set (see Figure 1 for screening process). Of the 376 participants who consented to the survey, 27 were removed for not submitting any responses. Further, 107 were excluded for either being outside of the US (despite agreeing that they were within the US), possibly being a bot, or responding in an inconsistent or inattentive fashion. Finally, 34 participants were removed because their traumatic experiences were not within the past three years and/or they did not disclose their trauma to anyone. Therefore, 208 participants were included. Of the 208 participants included in the final analyses, only 5 had missing data. All 5 were missing one response each, and so the missing item-level responses were imputed using the mean of that item.

When we examined the bivariate associations between posttraumatic growth, trauma disclosure, and pressure to disclose, these associations were not in the expected directions. Exploration of residual plots (i.e., histogram, dependence plot, and S-L plot) indicated that the growth-disclosure and the growth-pressure bivariate associations were not linear; in both cases, there was an initial increase in the association between the predictor and posttraumatic growth, followed by a decrease.

When we examined the posttraumatic growth residuals with disclosure and pressure in the model, the model was notably more linear; however, there remained some nonlinearity in the residuals at high levels of pressure to disclose. Thus, we added the quadratic effect of pressure (pressure-squared), which resulted in a model that appeared to meet the assumption of linearity.

Bivariate correlations, as well as their descriptive statistics, are presented in Table 1.

Inconsistent with our expectations, positive response to disclosure was not correlated with higher growth ( $r = .026, p = .715$ ), negative response to disclosure had a significant positive correlation with growth ( $r = .476, p < .001$ ), and pressure to disclose had a significant positive correlation with posttraumatic growth ( $r = .51, p < .001$ ). Consistent with our expectations, PTSD symptoms were significantly positively associated with greater growth ( $r = .530, p < .001$ ), further supporting their inclusion in the model.

### Primary Analyses

We ran a series of regression models to examine the association between trauma disclosure, pressure to disclose, and posttraumatic growth (see Table 2). First, we examined our hypotheses using only linear terms. Then, we added the quadratic effect of pressure to disclose (identified in the bivariate models discussed in the preliminary analyses section above). This allowed us to examine the importance of the quadratic effect of pressure when other relevant variables were included in the model.

First, we ran a model that only included our covariates — PTSD symptoms, positive response to disclosure, and negative response to disclosure (see Table 2, Model 1). This model accounted for a significant amount of variance in posttraumatic growth ( $R^2 = 0.343$ ) and all the covariates were significantly associated with growth. Then, we added the linear effects of trauma disclosure and pressure to disclose (see Table 2, Model 2). This model supported our first hypothesis, showing that the more a person disclosed, the greater their overall posttraumatic growth ( $B = 1.055, SE = 0.238, p < .001$ ). However, counter to our second hypothesis, Model 2 did not indicate a negative association between pressure to disclose and posttraumatic growth ( $B = .475, SE = 0.368, p = .199$ ). Adding the disclosure and pressure terms to the model accounted

for an additional 6.2% of the variance in posttraumatic growth. Next, we added the interaction between disclosure and pressure to disclose (see Table 2, Model 3). Adding the interaction term did not improve the model fit, nor was the interaction significant in the model. However, when we added the quadratic effect of pressure to disclose and the interaction between quadratic pressure with trauma disclosure (see Table 2, Model 4), this did account for significantly more variance in posttraumatic growth ( $\Delta R^2 = 0.028, p = 0.008$ ), supporting our third hypothesis and indicating that the quadratic association between pressure to disclose and posttraumatic growth was a better representation of the data than the linear association. Additionally, the interaction between quadratic pressure to disclose and trauma disclosure was significant ( $B = -0.010, SE = 0.004, p = .009$ ; see Table 2, Model 4).

### ***Pressure to Disclose as a Moderator***

To further examine the moderating effect of pressure to disclose on the association between disclosure and posttraumatic growth, we conducted simple-slope tests. We probed the moderation effect using the range of our observed data (minimum observed score, mean score, and maximum observed score), so that we could more fully examine—and subsequently visualize—the quadratic association (see Figure 2).

Simple-slope tests (see Figure 2) indicated that the positive association between disclosure and growth initially became stronger from low pressure ( $B = 0.818, SE = 0.267, p = .003$ ) to moderate pressure ( $B = 2.109, SE = 0.471, p < .001$ ). However, due to the quadratic effect of pressure, when pressure was high, the association between disclosure and growth became negative ( $B = -1.19, SE = 1.327, p = .373$ ); although the association was not statistically significant.

These findings indicate that a moderate amount of pressure is associated with greater growth than low pressure; however, as pressure increases from moderate to high, the moderating effect of pressure on the association between disclosure and growth becomes disadvantageous. Collectively, this moderating effect only partially supported our third hypothesis because we assumed there would be linear moderation, when moderation was found to be curvilinear.

### ***Trauma Disclosure as a Moderator***

While we hypothesized that pressure moderated disclosure's association with growth, we also considered the potential moderating effect of disclosure on the association between pressure and growth to explore our findings in an alternate way. Simple-slope tests (see Figure 3) revealed that the quadratic association between pressure and growth became more pronouncedly concave from low disclosure ( $B = 0.174, SE = 0.103, p = .091$ ), to average to disclosure ( $B = -0.069, SE = 0.032, p = .030$ ), to high disclosure ( $B = -0.193, SE = 0.069, p = .006$ ), though it should be noted that the quadratic association at low disclosure was not statistically significant.

As indicated by Figure 3, those who disclose an average amount have the highest growth at average levels of pressure with growth decreasing as pressure decreases or increases. A similar yet more pronounced pattern occurs for high disclosers; when experiencing average pressure, they experience the most growth and when experiencing below average or above average pressure they experience less growth, with high pressure being especially disruptive to growth.

## **Chapter 4: Discussion**

Disclosure has been found to predict improved posttraumatic outcomes (Slavin-Spenny et al., 2011), yet external forces that impede trauma survivors' sense of control and empowerment over their trauma-related experiences can lead to attenuated growth and recovery (Rose et al., 2002; van Emmerik et al., 2002). This led us to investigate the association between pressure to disclose and posttraumatic growth. Our first hypothesis that the greater the disclosure the greater the posttraumatic growth was supported. Contrary to our second hypothesis, pressure to disclose was not associated with posttraumatic growth. However, our third hypothesis was partially supported by our data, demonstrating that pressure to disclose moderates the association between trauma disclosure and posttraumatic growth quadratically. Specifically, our findings indicate that pressure to disclose has a positive impact on growth for low to moderate levels of trauma disclosure, which changes into an adverse impact on growth as disclosure increases from moderate to high. In other words, we found a Goldilocks-type effect, showing that there is an amount of pressure that is just right for supporting posttraumatic growth, and that ideal amount of pressure is in the middle of low and high pressure.

### **The Moderating Effect of Pressure to Disclose**

Overall, our findings indicate that some pressure to disclose can strengthen the association between disclosure and growth and too much pressure is problematic. A reasonable interpretation of this finding is that while some pressure creates challenges that spark growth, too much pressure presents too much challenge and overwhelms trauma survivors. We can conceptualize pressure to disclose within a zone of proximal development framework. Too little or too much pressure is unhelpful, but when there is a balance between safety and challenge, the



discloser can risk exploring new beliefs and previously problematic experiences can become enriching, facilitating growth (Ribeiro et al., 2013; Stiles et al., 2016).

One reason we expected any amount of pressure to disclose to impede the positive disclosure-growth association was that researchers have emphasized the importance of greater empowerment and freedom to choose for survivors of trauma (Bisson et al., 2007; Knight, 2018). However, our findings indicate a more nuanced effect of pressure. It may be that some amount of pressure is not enough to take away a survivor's sense of empowerment, which is vital for trauma-informed practice. If the pressure to disclose experienced is not too high, then the person may experience an amount of challenge that does not impede their sense of control yet provides enough challenge that they are pushed towards growth.

Another explanation for moderate levels of pressure to disclose strengthening the positive association between disclosure and growth is that pressure facilitates trauma processing. Aspects of trauma processing that have been indicated to facilitate growth such as challenging beliefs, provoking altered understandings of the world, and confronting formerly held assumptions, could all be prompted by the challenging conversations and friction between viewpoints that arises from low to moderate levels of pressure (e.g., Dekel et al., 2012; Sloan & Marx, 2004, Tedeschi & Calhoun, 2004). Further, in our sample, those who experienced little pressure only marginally increased their posttraumatic growth as they disclosed more. These lower levels of growth could be due to a lack of challenging and stimulating dialogue, and therefore a lack of trauma processing.

Another explanation for why some pressure to disclose was found to be associated with posttraumatic growth is that we only asked participants to indicate the amount of pressure to disclose they experienced, not their perceptions of others' intentions when pressuring them to

disclose. In other contexts, when people perceive others' intents as benevolent rather than indifferent or mean spirited, they experience the interaction more favourably despite the interpersonal behaviour being the same (Gray, 2012). In our study, since we examined pressure from close others, disclosers may have perceived the pressure as originating from genuine concern. So, while pressure to disclose may not be wanted, if pressure is perceived as coming from a place of caring, some pressure—although not too much—may facilitate growth.

### **Disclosure as Moderator**

While not part of our initial hypotheses, we also explored the moderating effect of disclosure on pressure's association with growth. When we compared those who disclosed a moderate amount with those who disclosed a lot (see Figure 3), those who disclosed more had a greater increase in growth when there was some pressure, as well as a greater decrease in growth when there was substantial pressure. We can interpret these findings as indicating that disclosure is increasingly beneficial for posttraumatic growth except when pressure to disclose exceeds moderate levels. This is consistent with our previous discussion of trauma survivors' sense of control (e.g., Bisson et al., 2007; Knight, 2018). For those who disclose a lot, when they experience some pressure, they maintain a sense of control over their disclosure, but when they experience a great amount of pressure, they lose that sense of being in control of their own choices, which may impede their posttraumatic growth. However, among those who disclose little, pressure did not impede growth. Unlike moderate to high disclosers, those who disclose little may not feel like their control is impeded because even when they experience substantial pressure to disclose, they can maintain control by disclosing little. This may be due to the impact that subverting others' control has on a survivor's empowerment. As discussed previously, a sense of control and empowerment are likely important aspects for trauma survivors, and so

these aspects may be achieved when a survivor refrains from giving in to a person who is greatly pressuring them to disclose.

### **Implications for Practice**

Stemming from our findings, we present several potential implications for both those who are interacting with trauma survivors and for those trauma survivors who are interacting with others. First, we recommend that family members, friends, partners, and practitioners talking to trauma survivors are vigilant in using some pressure but not too much. From our findings it seems that some pressure to disclose may facilitate posttraumatic growth, but that too much pressure impedes growth. It may be helpful to conceptualize optimal pressure as when the pressure is enough to nudge the person to explore thoughts and feelings that are uncomfortable, yet not enough pressure to interfere with their sense of safety and control. When moderate amounts of pressure are applied, trauma survivors can feel safe and in control over their situation while still experiencing an amount of challenge that benefits their trauma processing and growth. This Goldilocks principle of a just-right amount of pressure is consistent with a therapeutic zone of proximal development where a balance between safety and challenge encourages disclosers to move beyond what is comfortable to gain new understanding.

Second, for those disclosing to close others about their traumatic experiences, our findings indicate that it is important for trauma survivors to move out of their comfort zones while still holding on to their sense of control. For trauma survivors who are disclosing, feeling some discomfort from challenges to their world views could spark greater growth. However, it seems to also be important for trauma survivors to be cautious of pressure from others leading them to disclose so much that they feel like they have lost control. In cases where trauma survivors feel like their sense of control is being threatened by interpersonal pressure, it may be

best to disclose very little, so they maintain their sense of control. In sum, we encourage trauma survivors to be mindful of the balance between their safety and discomfort while they are discussing their traumatic experiences with others.

### **Limitations and Future Directions**

The primary limitation of our research was the cross-sectional nature of our study, which hindered our ability to make causal inferences about the associations between disclosure, pressure to disclose, and posttraumatic growth. Further research should aim to enhance our understanding of disclosure by designing longitudinal studies investigating the impact of pressure to disclose on posttraumatic growth. It may be that experiencing higher pressure to disclose causes a subsequent increase in disclosure or lower disclosure causes a subsequent increase in pressure to disclose. It may also be that posttraumatic growth encourages people to disclose or prompts others to increase their pressure to disclose. Another interesting direction for future research would be to investigate the impact of variability in the degree of closeness between disclosers and close others on the association between pressure to disclose and posttraumatic growth. In the current study we asked participants to tailor their responses to the closest person they experienced disclosing to, and so there was little to no variation in the degree of closeness between discloser and the person they disclosed to (i.e., most of our sample selected their closest other as a friend, partner, or family member). Perhaps the degree of closeness between the discloser and the other person matters for how pressure to disclose impacts posttraumatic growth. This would be particularly relevant for understanding the effects of pressure in posttrauma debriefing and related contexts.

## Tables and Figures

**Table 1**

*Descriptive Statistics and Correlations for Primary Study Variables*

Variable	1	2	3	4	5	6	<i>M</i> ( <i>SD</i> )	Measure range	Sample range
1. PTSD symptom severity	-						46.81 (21.96)	20 – 100	20 – 94
2. Positive response to disclosure	-.285***	-					23.32 (3.54)	4 – 28	12 – 28
3. Negative response to disclosure	.816***	-.463***	-				20.00 (10.39)	6 – 42	6 – 41
4. Trauma disclosure	-.539***	.583***	-.617***	-			40.89 (9.65)	8 – 56	11 – 56
5. Pressure to disclose	.852***	-.322***	.861***	-.540***	-		14.43 (10.03)	5 – 35	5 – 35
6. Posttraumatic growth	.530***	.026	.476***	-.058	.511***	-	94.28 (29.68)	25 – 150	25 – 144

*Note.* PTSD = Posttraumatic stress disorder.

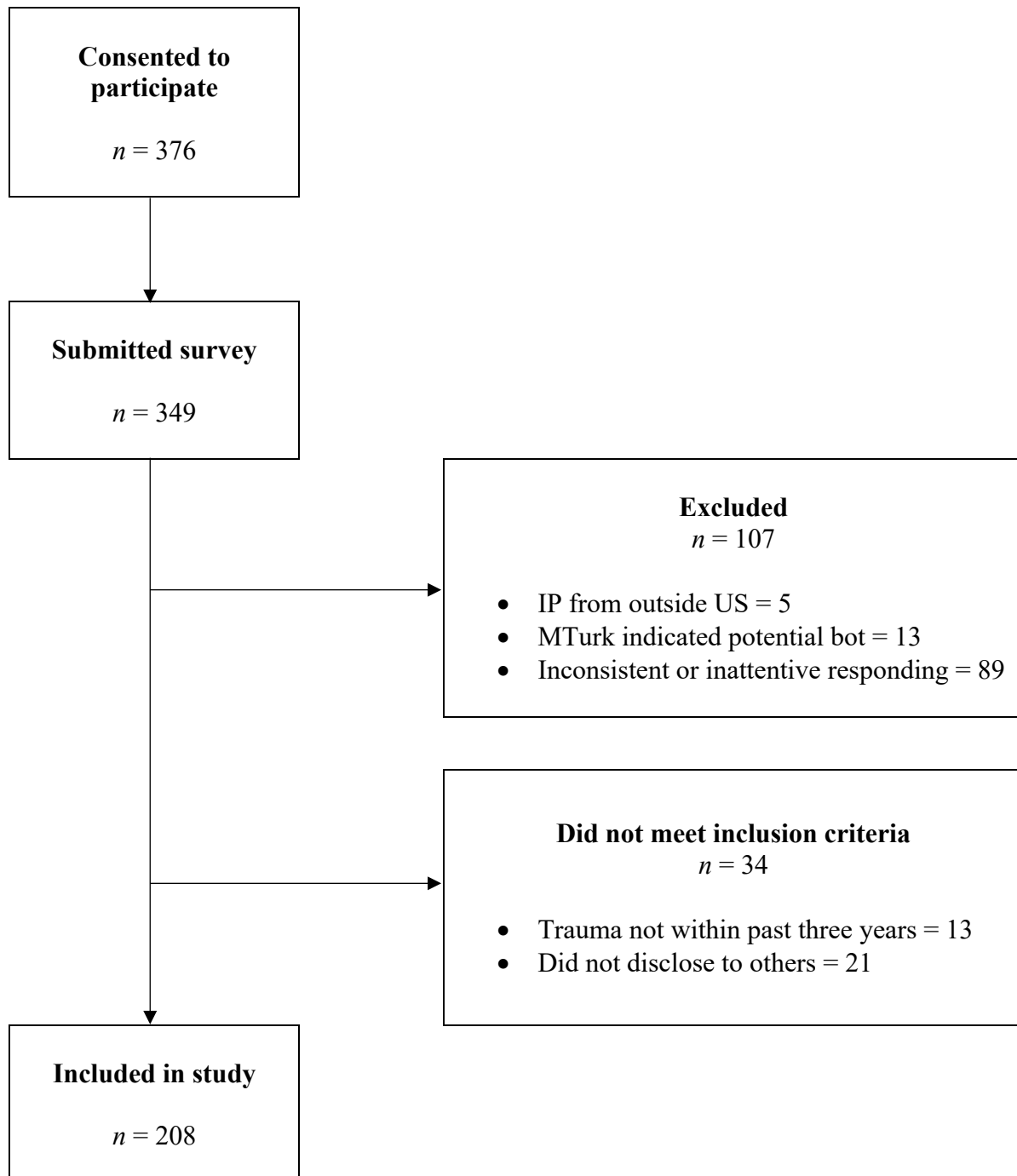
\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 2***Hierarchical Regression Analyses Predicting Posttraumatic Growth*

Variable	Model 1		Model 2		Model 3		Model 4	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	94.283***	1.681	94.283***	1.607	94.777***	3.510	103.178***	4.079
PTSD symptom severity	0.470***	0.135	0.476**	0.150	0.474**	0.151	0.508***	0.149
Positive response to disclosure	2.285***	0.546	1.061	0.587	1.046*	0.591	1.158	0.650
Negative response to disclosure	0.911**	0.309	0.916*	0.353	0.927*	0.356	0.718	0.377
Trauma disclosure			1.055***	0.238	1.116***	0.313	2.109***	0.471
Pressure to disclose			0.475	0.368	0.510	0.387	0.933*	0.410
Pressure to disclose <sup>2</sup>							-0.076*	0.032
Trauma disclosure x Pressure to disclose					0.009	0.031	0.044	0.033
Trauma disclosure x Pressure to disclose <sup>2</sup>							-0.010**	0.004
<i>R</i> <sup>2</sup>	.343***		.405***		.405***		.433***	
$\Delta R^2$			.062***		.001		.028**	

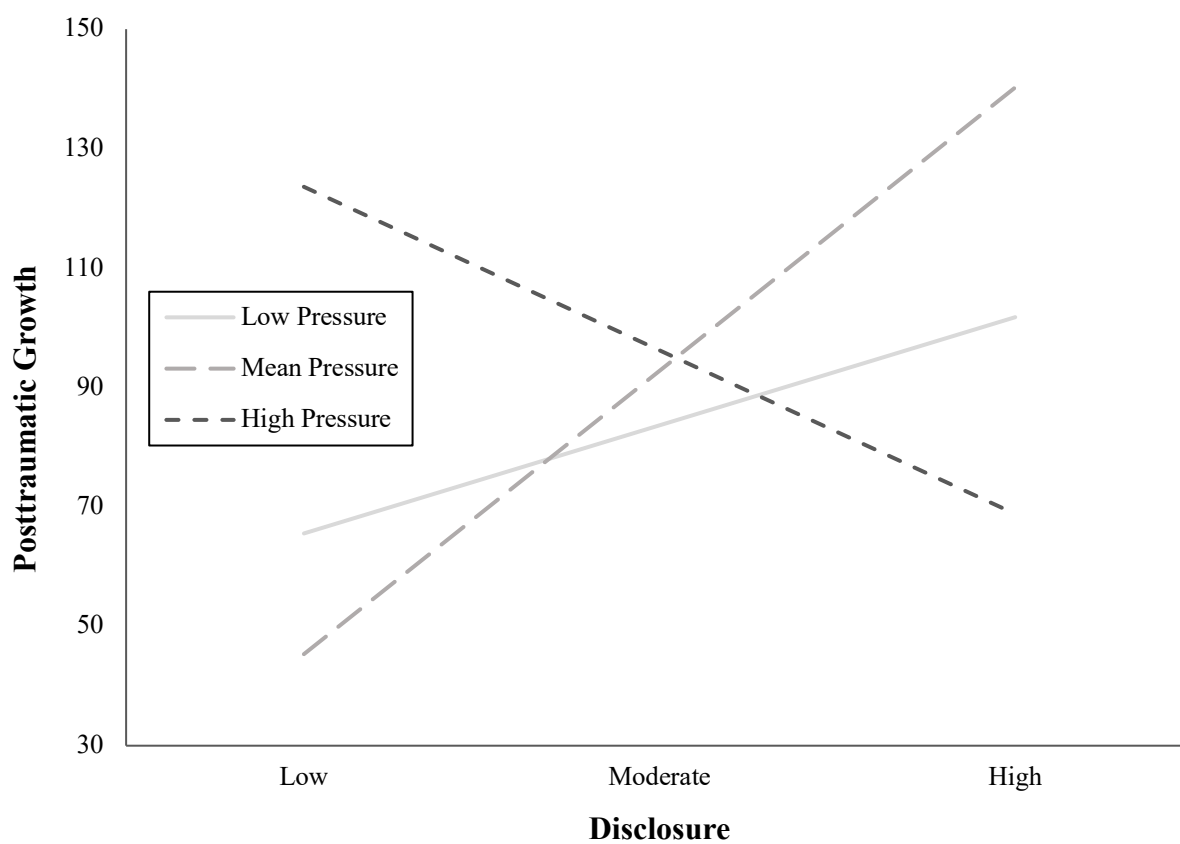
*Note.* Predictor variables were mean centered. PTSD = Posttraumatic stress disorder.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Figure 1***Participant Flow*

**Figure 2**

*Moderation of the Association of Disclosure and Posttraumatic Growth by Pressure to Disclose*

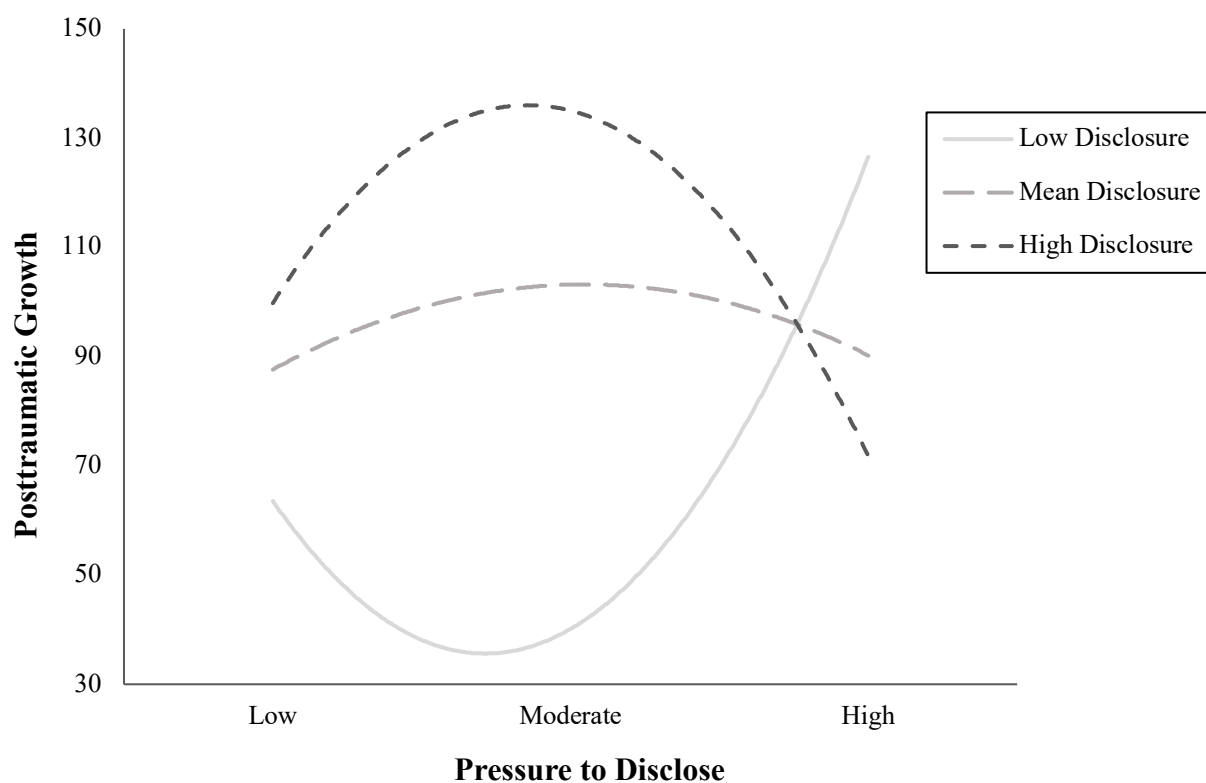


*Note.* Simple slopes of the association between trauma disclosure and posttraumatic growth moderated by pressure to disclose. Disclosure is categorized as low (minimum observed score), moderate (mean score), and high (maximum observed score).



**Figure 3**

*Moderation of the Association of Pressure to Disclose and Posttraumatic Growth by Disclosure*



*Note.* Simple slopes of the association between trauma disclosure and posttraumatic growth moderated by pressure to disclose. Disclosure and pressure are categorized as low (minimum observed score), moderate (mean score), and high (maximum observed score).

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### **Appendix: Pressure to Disclose Scale (PDS)**

We just asked you about talking to the person you are closest with about your stressful experience. Individuals who have discussed a difficult event vary considerably in how much they felt pressured, pushed, or urged by others to talk about it. We'd like to know if you have felt pressured, pushed, or urged by the person you are closest with to talk about your most difficult experience.

0 = not at all

1 = rarely

2 = a little bit

3 = moderately

4 = quite a bit

5 = often

6 = a great deal

1. They pressured me to talk about feelings related to my experience that I did not want to discuss.
2. They pressured me to talk about thoughts related to my experience that I did not want to discuss.
3. They pressured me to talk about details related to my experience that I did not want to discuss.
4. I talked about my experience with them because they pressured me to do so.
5. They pressured me to talk about my experience at a time when I did not want to discuss my experience.

Questions 1 to 3 were derived from the Friend Autonomy Support Questionnaire (FASQ; Deci et al., 2006) item "My support network encourages me to express my true emotions". This became an item aimed at evaluating the pressure placed on feelings, thoughts, and details, "I was unable to avoid emotions, thoughts, details, I didn't want to share". The final form involved three separate items, each evaluating their own dimension (i.e., emotions, thoughts, details).

Question 4 was derived from the Balanced Measure of Psychological Needs (BMPN; Sheldon & Hilpert, 2012) item "I had to do things against my will". This was modified to assess the individual having to disclose against their will.

Question 5 was an item created by the researchers to evaluate pressure over when to disclose.