

The Effect of PTS Symptoms on Negative Emotions and the Role of Social Support
During a Commemoration

Master Thesis Clinical Psychology

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Abstract

Commemorations have an impact on society, but also on each individual that is attending. Previous research has indicated that a commemoration has the potential to reignite trauma and also elicit a negative emotional reaction. Therefore, the present study examines if post-traumatic stress (PTS) symptoms because of a war can predict a change in negative emotions during a commemoration. Additionally, it examines if social support has an influence on the relationship between PTS symptoms and negative emotions. In total 97 participants completed the Posttraumatic Stress Disorder Checklist (PCL-5), reported their negative emotions before and after watching the Dutch National Remembrance Day ceremony and answered two questions about social support. A multiple regression analysis was conducted to investigate the contribution of PTS symptoms on negative emotions when watching a commemoration while controlling for age and gender. Furthermore, the interaction effect of social support was examined through a moderator analysis. The results showed that experiencing more PTS symptoms was associated with an increase in negative emotions when watching a commemoration ceremony. The control variables age and gender appeared to have no significant effect. Moreover, social support did not play a role in the relationship between PTS symptoms and negative emotions in association with commemorating. These findings highlight the importance of understanding the impact of remembrance ceremonies and the effect it can have on the emotions of victims of war. Having more knowledge on this effect could be beneficial for supporting people with PTS complaints and adjusting commemorations to their needs.

War plays a role in human history for as long as we can remember and is still a daily issue. There is no question that war has an impact on the people experiencing it.

Commemorations link past events to the present and help people remember, share memories and bond together (Barron, Davies, & Wiggins, 2008). For example, in the Netherlands there is an annual National Remembrance Day on the 4th of May. On this day the Dutch commemorate all the soldiers and civilians who died in the Second World War (WW2) and other conflicts that have happened since then. A core element of the ceremony is the two minutes of silence, in which people feel connected with each other, according to Duindam (2012). This vision of feeling connected is supported by Beristain, Paez, & Gonzalez (2000), who suggest that collective commemoration reinforces emotional arousal and elicit social solidarity. However, commemoration ceremonies do not only have a supportive role. They have a potential to reignite trauma as well (Stanley, 2000). A study by Burnell, Boyce, and Hunt (2011), among thirty veterans, revealed that a commemoration can be experienced as unnecessary or too emotionally challenging when the public discourse of a war has attracted national and international disapproval. Since commemorating has an impact on society but also individuals, it is important to be aware of the different effects such a remembrance ceremony can have on those affected by war. For example, veterans can be dramatically affected by visiting memorials (Watkins, Cole, & Weidemann, 2010). Similar findings have been observed by Gishoma et al. (2015) in Rwanda, where survivors of the genocide re-experience their past traumatic experiences by participating in commemoration activities.

Moreover, taking part in such a remembrance ceremony is linked with having reinforced intrusive thoughts, rumination of the trauma and overall reinforced post-traumatic stress disorder (PTSD) symptoms (Gasparre, Bosco, & Bellelli, 2010; Bensimon, Bodner, & Shrira, 2017). In the DSM-5 PTSD is identified by a set of symptoms that occur as a response to a traumatic or stressful event. These post-traumatic stress (PTS) symptoms can include re-

experiencing the traumatic event (vivid flashbacks, nightmares), avoiding trauma-related stimuli, having increased negative thoughts or having trauma-related arousal (American Psychiatric Association, 2013). Fortunately, most people who experience a traumatic event will not meet the criteria for PTSD, but often do experience PTS symptoms (Bonanno, Galea, Bucciarelli, & Vlahov, 2007). However, not only the traumatized individual that experiences PTS symptom suffers, but also the people close to this person. In a quantitative study by Dirkzwager, Bramsen, Adèr, and Ploeg (2005) among 708 partners of Dutch military, revealed that the partners also showed PTS symptoms themselves because of their partners problems. Moreover, it has been shown that parental PTSD can lead to PTSD in the child (Yehuda, Halligan, & Grossman, 2001). Thus, people can experience direct or indirect complaints from a war and struggle with several PTS symptoms. Furthermore, a study by Watson, Tuorila, Detra, Gearhart, and Wielkiewicz (1995) has indicated that by re-exposing people to symbols of their trauma, for instance during a commemoration, there can be a small decrease in PTS symptoms, but only short-term.

Besides an increase in PTS symptoms as a result of commemorating, negative emotions are affected. For example, the study by Bensimon et al. (2017) showed that people suffering from relatively higher levels of PTS symptoms will likely experience more negative emotional reactions to a commemoration. Additional research has shown that survivors of a trauma who experience PTS symptoms can have a feeling of being misunderstood and they experience an increase in negative emotional reactions when attending a commemoration (Burnell, Coleman, & Hunt, 2010; Beristain et al., 2000). Furthermore, a model by Charles (2010) explained that when older adults that suffer from chronic stress are confronted with a stressful stimulus, for example a commemoration ceremony, they will react with more negative affect than young adults. In specific, emotions like sadness, anger, anxiety and

sorrow will be reinforced through collective commemorations (Beristain et al., 2000; Durkheim, 1912/1995; Ibreck, 2010).

Nevertheless, there are also protective factors that can function as a buffer in experiencing these negative emotions. Collective commemoration enables veterans to feel valued for their service (Burnell et al., 2010). An important factor that has been studied is that social support appears to help in dampening the emotional response, for instance sadness, that occurs as reaction to a stressful event (Cohen, 2004; Gishoma et al., 2014). Also, the chance to talk to people about problems has been shown to reduce PTS symptoms, such as intrusive thoughts, and depressive symptoms (Lepore, Silver, Wortman, & Wayment, 1996). Social support is the perception of an individual that they are valued, cared for and part of a social network, which helps the individual to cope with stress (Cobb, 1976; Cohen, 2004). The qualitative study by Barron et al. (2008), among 61 veterans from the UK, revealed that veterans who received social support from the community at collective commemorations seem to cope better with their traumatic wartime experiences. But on the other hand, taking part in a commemoration could also highlight the absence of social support. For example, Barron et al. (2008) suggested that female veterans experience less social support than males after a collective commemoration, because they feel forgotten by society. Since social support plays such a big role when dealing with PTS symptoms, emotional affect and commemorations, it is important to be aware of this effect.

In summary, previous research suggests there is an effect of PTS symptoms on the emotional reaction of individuals when attending a commemoration ceremony (Bensimon et al., 2017; Burnell et al., 2010). However, these findings are often based on qualitative research, so we will use a quantitative method to further explore this effect. Furthermore, the moderating role of social support has often been examined and shows to be most effective at high levels of stress during a stressful event (Hunt & Robbins, 2001; Krause, 1989). But not

much is known about the role of social support between PTS symptoms and a change in (negative) emotion by a commemoration. By conducting this study, we can take a closer look at commemorations and have a deeper understanding of the effects on people who have experienced war, first-hand or second-hand, and show PTS symptoms because of this. As a paper by Fogelman and Bass-Wichelhaus (2002) proposes, based on observation and interviews with Holocaust child survivors, commemorations can help release the negative emotions and begin the mourning of the losses. Awareness on the impact of remembrance ceremonies could be beneficial for counsellors and therapists supporting people with PTS symptoms. Furthermore, knowledge on how commemorations are perceived by victims of war can be used to adjust commemorations to their needs.

Accordingly, the aim of this study is to explore to what extent PTS symptoms are related to a change in negative emotion, when watching the Dutch National Remembrance Day ceremony, and if the experience of social support during the commemoration has an influence on this effect. As mentioned before, differences in gender and age could have an effect on the emotional change when watching a commemoration (Barron et al., 2008; Charles, 2010; Bensimon et al., 2017). Therefore, we will take these variables into account as well. This study is among a population that experiences trauma complaints because of a war. Given the previous research, the first expectation is that there will be an effect of PTS symptoms on the change in negative emotions when watching a commemoration. Additionally, the expectation is that there will be a weakening effect of social support on the relationship between PTS symptoms and the experience of negative emotions.

Method

Procedure

The data for this study has been collected through convenience sampling and snowballing methods, mainly within the researchers' networks. Participants were recruited

through information letters at, for example, nursing homes, through e-mail and poster campaigns. The questionnaire was filled out online without help, or in the presence of a researcher in order to have technical and emotional support if needed. All participants have given their informed consent to be part of the study before filling out the questionnaire. Furthermore, ethical approval was provided by the ethical committee from the faculty of social sciences of Utrecht University.

Design

The present study has an experimental design, derived from the trauma film paradigm developed in the 1960's by Lazarus and colleagues (Lazarus & Alfert, 1964; Lazarus & Opton, 1964; Lazarus, Opton, Nomikos, & Rankin, 1965; Speisman, Lazarus, Mordkoff, & Davison, 1964). This method involves showing short films containing scenes depicting stressful or traumatic events in order to evoke emotions and intrusions that are linked to a real-life experience and therefore induce PTS symptoms (Holmes & Bourne, 2008). First, the participants had to fill out a short questionnaire about the socio-demographics, emotions and PTS symptoms connected to their war experiences. Then they watched a 15-minute film fragment from the Dutch National Remembrance Day ceremony on the 4th of May. Finally, the participants filled out a questionnaire in which they rated their emotions again and their experience of social support through watching the commemoration.

Manipulation check. To test if the emotional reaction when watching the film fragment can be compared to the real experience of the Dutch National Remembrance Day ceremony, a manipulation check was conducted with two questions. The first item was 'does your emotional response to the film fragment that you have just seen match your response during the commemoration on May 4?'. Participants could respond on a scale from 1 (much less intense) to 5 (more intense) or 0 (I don't know, I don't participate in the commemoration). The second item was 'during the two-minute silence in the film fragment,

have you commemorated in the same way as you would during the commemoration on May 4?'. The response was rated again on a scale from 1 (not at all) to 5 (to a very high extent) or 0 (I don't know, I don't participate in the commemoration). Overall, 4 people responded that they do not participate in the national commemoration. The mean score of the first item was 2.96 ($SD = 0.97$) and item two had an average of 3.11 ($SD = 1.18$). So, the manipulation check showed that according to the participants seeing the film fragment triggered an emotional reaction that is comparable to the emotional reaction during the Dutch National Remembrance Day ceremony.

Participants

The inclusion criterium was that participants must experience PTS symptoms because of a war. The symptoms may be due to personal experience with war, or due to a second-hand experience of relatives or friends who have experienced a war. 4 participants with more than 15% missing values on the questionnaire for PTS symptoms or negative emotions items were removed from the data. Overall, 97 people were included in the analyses, with 61 male (62.9%) and 36 female (37.1%) participants. The age of the participants varied from 24 to 95 years old ($M = 60.06$, $SD = 17.47$). Additional details on the war experience, place of birth, education and religion of the participants can be found in Table 1.

Table 1

Demographic characteristics of the participants (N = 97).

Variable	N	%
War experience		
Second World War (WWII)	20	20.6
Refugee	23	23.7
Veteran	36	37.1
After-war generation*	18	18.6
Place of birth		
Netherlands	65	67.0
Dutch East Indies	5	5.2

Syria	8	8.2
Other	19	19.6
Education		
Lower educated (<college/university)	41	42.3
Higher educated (college/university)	56	57.7
Religion		
Christian	31	32.0
Islamic	14	14.4
Jewish	2	2.1
No religion	44	45.4
Other	6	6.2

Note: *People who experience complaints of a war that they have not experienced themselves.

Measures

This study was part of a bigger research and the questionnaires that are used in this study were part of the total questionnaire.

Socio-demographic. Questions on socio-demographic factors were included in the questionnaire. For example, questions on gender, age, war experience, place of birth, education and religion.

Posttraumatic Stress (PTS). The Posttraumatic Stress Disorder Checklist (PCL-5) by Weathers et al. (2013) is a questionnaire corresponding to the DSM-5 symptom criteria for PTSD. In this study the Dutch version of the PCL-5, developed by Boeschoten, Bakker, Jongedijk, and Olff (2014), was used to measure the PTS symptoms. The PCL-5 consists of 20 items and assesses to what extent the participants have been troubled during the last month by the stressful events that they, or their loved ones, experienced during the war. An item is for example, ‘regular recurring, unpleasant and unwanted memories related to the stressful event’. Participants were asked to rate each item on a scale ranging from 0 (not at all) to 4 (extremely much). The PCL-5 has demonstrated excellent internal consistency, making this a sound measure of PTSD symptoms according to Blevins, Weathers, Davis, Witte, and

Domino (2015). In the present study the Cronbach's alpha for the 20 PCL-5 items was 0.96, indicating excellent levels of reliability.

Emotional Affect. To measure the negative emotions during a commemoration, 5 items were chosen from the expanded version of the Positive and Negative Affect Schedule (PANAS-X) developed by Watson and Clark (1994). The selection of the items from the PANAS-X was based on the most relevant reactions on a commemoration: sad, gloomy, angry, anxious and ashamed. Participants had to score the emotion they felt at the moment on a visual analogue scale (VAS) from 0 (not at all) to 100 (a lot), in order to detect small changes across a continuum (Wewers & Lowe, 1990). To calculate the negative emotional change, the negative emotions experienced after watching the commemoration were subtracted from the negative emotions experienced before the commemoration. The reliability in this study for the negative emotions items was good for the before scores with a Cronbach's alpha of 0.82 and 0.80 for the after scores.

Social Support. To assess support two statements were included in the questionnaire: "Through watching the commemoration, I feel supported by the people around me" and "Through watching the commemoration, I feel connected with the people around me". Participants could rate their answer on a five-point scale ranging from 1 (not at all) to 5 (extremely much). The reliability of these two items was acceptable with a Cronbach's alpha of 0.74.

Data Analysis

For the analyses of the present study SPSS version 25.0 was used (IBM Corp., 2017). There were no extreme scores and participants with more than 15% missing values on the questionnaires were removed from the analyses. Moreover, person mean imputation was used to replace the missing value of one participant (Enders, 2003). A hierarchical multiple linear regression analysis was conducted to examine if PTS symptoms were a predictor of the

change in negative emotions, controlled for age and gender. A moderator analysis was used to investigate the moderating role of social support in the relationship between PTS symptoms and negative emotional change. To calculate the interaction effect the extension PROCESS Macro for SPSS by Hayes (2018) was used with model number 1 (moderation). Furthermore, the assumptions of linear regression analysis have been checked looking at scatterplots and histograms of the data. The assumption of normality was questionable, because the data was slightly skewed (Shapiro-Wilk, $p = .007$). However, the probability plot did not reveal drastic deviations from normality. Therefore, the analyses were conducted as if the assumption was met. The assumptions of linearity, homoscedasticity and independence were all met and there was no problem with multicollinearity.

Results

Descriptive Statistics

Means, standard deviations, minimum and maximum scores of the variables are presented in Table 2. The mean score of PTS symptoms in this sample ($M = 21.28$) indicates that the participants did not meet the criteria for a PTSD diagnosis, based on the cut-off score of 33 suggested by Bovin et al. (2016). Furthermore, after watching the commemoration participants scored overall higher on negative emotions than before seeing the film fragment. On average, the participants experienced moderate social support.

Table 2

Descriptive statistics of the variables PTS symptoms, negative emotions before, negative emotions after and social support

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Min	Max
PTS symptoms	97	21.28	17.47	0	76
Negative emotions before	97	129.11	103.98	0	374
Negative emotions after	97	190.13	109.47	0	498
Social Support	92	6.32	2.18	2	10

PTS Symptoms and Negative Emotional Change

To investigate the relationship between PTS symptoms and the change in negative emotion, a hierarchical multiple regression analysis was conducted. The dependent variable was the negative emotional change and the independent variable was the total amount of PTS symptoms. First, the control variables age and gender were added in the model to see if these had an effect on the experience of negative emotional change. Age and gender explained 4% of the variance in negative emotional change, however this effect was not significant ($R^2 = .04$, $F(2,94) = 1.97$, $p = .145$). Second, the total amount of PTS symptoms was added in the model. This explained 5% of the variance in negative emotional change on top of the two control variables and was found to be significant ($\Delta R^2 = .05$, $F(1,93) = 5.32$, $p = .023$). Thus, in this sample only PTS symptoms explained a portion of the difference in negative emotional change. PTS symptoms showed to have a significant effect on negative emotional change ($b = 1.15$, $t(97) = 2.31$, $p = .023$). Experiencing more PTS symptoms is a significant predictor of more change in negative emotions during a commemoration (controlled for age and gender).

A summary of the regression model is presented in Table 3.

Table 3

Summary of hierarchical regression analysis predicting change in negative emotion from age, gender and PTS symptoms (N = 97).

Variable	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Age	0.85	0.52	.17	0.91	0.51	.18
Gender	22.71	18.62	.12	25.56	18.25	.14
PTS symptoms				1.15	0.50	.23*

*Note: * $p < .05$.*

Social Support

To examine if social support acts as a moderator in the relationship between PTS symptoms and change in negative emotion, the interaction effect was investigated. This

analysis was again controlled by gender and age. The independent variable was PTS symptoms, the dependent variable was negative emotional change and the moderator was social support ($N = 92$). Overall, 10% of the total variance of negative emotional change was explained by the moderation analysis model, but this model was not significant ($R^2 = .01$, $F(5,86) = 1.80$, $p = .121$). No significant interaction effect was found between PTS symptoms and social support on negative emotional change ($b = -0.34$, $t(92) = -1.49$, $p = .139$), although a trend in the expected direction could be observed, see Figure 1.

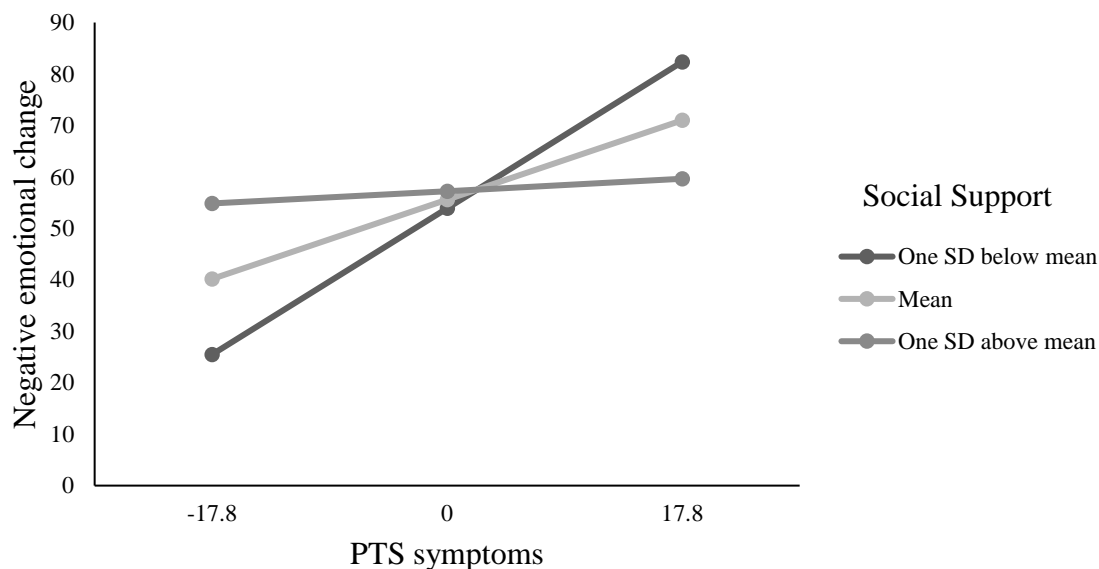


Figure 1. Graph of the effects of PTS symptoms on negative emotional change at three values of the moderator social support (the mean, and one standard deviation above and below the mean) using centred mean scores.

Discussion

Experiencing war has a tremendous impact on people and it is an experience that is not easily forgotten. Commemorations are important for society to remember and respect the victims of war, but also for individuals to come together and support each other. Overall, during collective remembering victims will experience higher emotional reactions, especially when dealing with PTS symptoms (Beristain et al., 2000; Bensimon et al., 2017). So, it is to

be expected that a remembrance ceremony will influence the negative emotions of people that have been personally in contact with war. But also, individuals that have family or friends who experience problems from a war can be affected and can show PTS symptoms themselves. The present study anticipated to find an effect of PTS symptoms on a change of negative emotions when watching the Dutch National Remembrance Day ceremony. The results of this study indeed suggest that experiencing more PTS symptoms is related to experiencing more negative emotions after watching a commemoration than before, while taking the effects of age and gender into account. These findings are in line with research by Bensimon et al. (2017) who showed that higher levels of PTS symptoms were related to more negative affect after listening to sad national songs, especially in older adults.

Additionally, an article by Charles (2010) suggested that there is indeed an effect of age on the experience of negative affect. Older people who experience high stress levels will likely react with more negative emotions to a stressogenic event and have less flexibility to recover. However, this effect was not found in the present study, as there appears to be no significant effect of the control variables age and gender in predicting the emotional change. Perhaps this difference could be explained by the fact that the sample of this study consists of people who experience PTS symptoms because of a war, which is a different type of stress than the participants in the studies mentioned by Charles (2010). Furthermore, a difference in gender was expected. The gender differences found by Barron et al. (2008) were from a sample of female veterans who did not feel recognized and supported by certain commemorations. However, the present study suggests that there may not be a clear distinction between men and women in how they experience and react to commemorations. The Dutch National Remembrance ceremony in specific. This shows there may be possible differences across commemorations, which could have resulted in the opposing findings.

Furthermore, this study aimed to find out if social support influences the effect between PTS symptoms and a change in negative emotions during commemorating. Cohen (2004) suggested that an interaction of stress and social support would benefit health and reduce the effects of stressful experiences. However, in contrast with this previous research, no significant interaction effect was established between social support and PTS symptoms. So, social support did not have a weakening effect on the experience of negative emotions as we predicted. The opposing findings in the present study could be explained because, as Barron et al. (2008) suggested, commemorations can be linked to a sense of belonging and bonding. Which may indicate that social support is related to the experience of positive emotions instead of negative emotions. So perhaps, experiencing PTS symptoms also has an effect on positive emotions and social support will play a significant role in this relationship. Because of these questionable findings, it would be interesting to further explore the role of social support on different emotional reactions in future research.

There are some limitations to the present study that have to be taken into account. First, the sample size was relatively low, which might have led to an inability to detect small effects. Furthermore, the two questions to measure social support were self-constructed to fit this study and more research is needed to test its validity and reliability. Finally, the participants in this study experienced PTS symptoms according to the PCL-5 questionnaire, but the majority had no serious complaints that would interfere with their lives and lead to a diagnosis of PTSD. This could be because people who struggle with PTSD would not want to participate in such a study as they find it too anxiety provoking. Therefore, the extent to which the current results can be generalized to for example, veterans with PTSD and have severe complaints because of war, is questionable.

Though some of these limitations might have impaired the outcome, this study indicates the importance of understanding the direct impact remembrance ceremonies can

have. A main effect was shown of PTS symptoms on a rise in negative emotions during a commemoration. Experiencing these negative emotions may be a step towards processing the memories and start mourning. These findings could inform counsellors and psychologists how to guide people who seek help for their complaints resulting from a war and give advice for attending commemorations. The results could also be used by committees to adjust commemorations more to the needs of those affected by war and, for instance, have a support system ready for after the ceremony.

However, we should be aware that people diagnosed with PTSD will probably be more affected by commemorations than the people who participated in this study, but further research should be conducted among this group. Building on the present study, it would be interesting to examine if there is an association between PTS symptoms and positive emotions during commemorating and to what degree social support has an effect in this relationship. Moreover, it could be relevant to investigate differences between commemorations and further examine factors that contribute to a commemoration in which everyone feels accepted and supported. At last, having more insight in the effects of commemorations on victims of a war who show PTS symptoms can help determine the possible facilitating role such a ceremony can have in processing the trauma.

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