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Posttraumatic stress disorder symptoms as a function of the interactive effect of subjective age and subjective nearness to death

Yaakov S.G. Hoffman [a,*], Amit Shrira [a], Sara Cohen-Fridel [b], Ephraim S. Grossman [a], Ehud Bodner [a,c]

[a] The Interdisciplinary Department of Social Sciences, Bar-Ilan University, Ramat Gan, Israel
[b] School of Education and The Interdisciplinary Department of Social Sciences, Bar-Ilan University, Ramat Gan, Israel
[c] The Department of Music, Bar-Ilan University, Ramat Gan, Israel

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ABSTRACT

An older age identity is related to higher posttraumatic stress disorder (PTSD) symptoms. However, in relating to PTSD symptoms, an older subjective age can interact with other major perceptions of aging, such as the subjective nearness to death, reflecting how close or far people experience themselves to be from their death. We examined this possible interaction effect on PTSD symptoms in two samples. Sample 1 included 1268 respondents exposed to missile attacks during the 2014 Israel-Gaza conflict. Sample 2 included 628 respondents exposed to terrorist attacks during the 2015 escalation in the Israeli-Palestinian conflict. Findings from both samples showed that after controlling for level of exposure and background characteristics, an older subjective age and perceiving death as near had an interactive effect on PTSD symptoms. While the combination of feeling older and nearer to death was related to the highest ratings of PTSD symptoms, effects of subjective age on PTSD symptoms were mitigated by perceiving death as far. These findings emphasize the importance of an integrative view of two time perspectives – one that focuses on time since birth and another that concerns time left until death – which can be conceptualized as reflecting psychological resources vis-à-vis adversity.

1. Introduction

Self-perceptions of age and longevity are psychological factors which play crucial roles in many domains such as health and finance, and are therefore relevant concomitants to current functioning and valuable predictors of future functioning (e.g., Griffin, Loh, & Hesketh, 2013; Uotinen, Rantanen, & Suutama, 2005). In this context, most of the evidence comes from subjective age, referring to the individual's evaluation of how old one perceives oneself to be, and subjective nearness-to-death (NtD), referring to the individual's evaluation of how much time one has until death. As shown below, recent evidence shows these two time perspectives (subjective age and NtD) may interact. Therefore, we address in two studies how the coupling of these two time perspectives may affect individuals in the aftermath of trauma. Below we address subjective age and NtD, in both their distinctive and interactive relationships to trauma and its aftereffects.

1.1. Subjective age

As opposed to chronological age, which is a good predictor of many developmental processes in the first half of life, subjective age has been found to be more relevant to functioning in the second half of life (Baars, 2013; Kotter-Grühn, Kornadt, & Stephan, 2016). A young subjective age is associated both with better physical functioning (Montepare, 2009) and more favorable mental functioning such as lower mental distress and higher wellbeing (Choi & DiNitto, 2014; Keyes & Westerhof, 2012; Solomon, Helvitz, & Zerach, 2009; Westerhof & Barrett, 2005).

One relatively recent aspect has been the relationship between subjective age, traumatic exposure and post-traumatic stress disorder (PTSD) symptoms. In recent studies, an older subjective age was associated both with traumatic exposure (Schafer, 2009; Turner, Runtz, & Galambos, 1999) and with PTSD symptoms (Avidor, Benyamini, & Solomon, 2016; Shrira, Palgi, Ben-Ezra, Hoffman, & Bodner, 2016; Solomon et al., 2009). This same relationship has been shown for subjective age and acute stress disorder symptoms, i.e., trauma symptoms that exist in the first month after a traumatic event has occurred (Hoffman, Shrira, & Grossman, 2015). In addition, in at least three studies, subjective age has also been related to stress symptoms on an interaction level. Shrira et al. (2016) have shown that a youthful age identity can mitigate the effects of PTSD on successful aging. In another study, Hoffman et al. (2015) have shown that young individuals with an

* Correspondence author.
E-mail addresses: hoffmay@gmail.com, hoffmay@biu.ac.il (Y.S.G. Hoffman), amit.shrira@biu.ac.il (A. Shrira), sara.fridel@biu.ac.il (S. Cohen-Fridel), Ephraim.Grossman@biu.ac.il (E.S. Grossman), Ehud.Bodner@biu.ac.il (E. Bodner).

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older subjective age were more susceptible to the initial effects of traumatic exposure than those with a younger subjective age. Palgi (2016) has shown that the relationship between PTSD symptoms and posttraumatic growth was moderated by subjective age; this relationship was stronger in individuals with a younger subjective age.

A theoretical framework for the relationship between subjective age and traumatic symptoms can be found in the subjective weathering hypothesis (Benson, 2014; Foster, Hagan, & Brooks-Gunn, 2008). Accordingly, experiencing trauma at a younger age may later lead to an older subjective age if one's emotional/cognitive maturity is not on par with current demands. Drawing on this theory, Palgi (2016) suggested that dealing with the demands of trauma exposure in addition to coping with the simultaneous aging difficulties might increase one's subjective age. Similarly, a young subjective age has been associated with buffering against psychological distress (e.g., Teuscher, 2009). Following these studies, it could be that feeling younger than one's age, at any age across the lifespan, reflects a perception that one has greater resources than the demands brought on by past and present life events. Accordingly, we wish to examine if a young subjective age, reflecting a resource related to better adjustment, wellbeing, and buffering against psychological distress, is associated with a lower level of PTSD symptoms even in young adulthood. Viewing a young subjective age as reflecting a perception that one has more resources than needed for coping with past and present events, is well aligned with the conservation of resources theory (e.g., Gerhart, Canetti, & Hobfoll, 2015). This theory claims that the development of trauma symptoms is associated with loss of coping resources, but when coping resources are self-perceived as adequate, trauma symptoms are less likely to develop.

1.2. Subjective nearness to death

As noted, subjective NtD is a separate time perspective related to how near one is to one's own death (Kotter-Grühn, Grühn, & Smith, 2010). While it has been somewhat less studied than subjective age, one's subjective NtD has been found to predict in the elderly both physical functioning and mortality (Griffin et al., 2013; Kotter-Grühn et al., 2010). A more limited future time perspective is also related to maladaptive emotional functioning (Grühn, Sharifian, & Chu, 2015). A higher subjective life expectancy, a proxy of subjective NtD, was also found to be negatively related to psychological distress (Griffin et al., 2013). Here as well, subjective NtD has also been related to stress symptoms on an interaction level. Palgi (2016) found that the association between PTSD symptoms and posttraumatic growth was moderated by subjective NtD, i.e., this association was stronger in individuals who felt a greater distance to death.

According to the terror management theory (Pyszczynski & Kesebir, 2011), developing PTSD after exposure to trauma may impair one's ability to employ anxiety-buffering mechanisms in general, and specifically the employment of buffers against death anxiety. PTSD individuals may thus be more pessimistic and believe that death is closer (Palgi, 2016). Following this theoretical framework, feeling far from death may not just be a reflection of how much time one has left, but instead like a young subjective age, believing death waits at a longer subjective distance may also reflect a resource, albeit of a different nature to that of subjective age. As shown below, subjective NtD should reflect the perception of one's current resources vis-à-vis future tasks. Feeling near to death suggests that one feels an insufficient amount of resources vis-à-vis future tasks. Feeling far away from death reflects that one possess adequate resources to handle tasks in the future time perspective. Such a perception may also enable better coping with the aftermath of trauma, i.e., this subjective stance should reflect a more optimistic outlook concerning one's remaining lifespan, a factor that may buffer against PTSD symptoms even after exposure to trauma. Similarly, people who looked forward to their future by setting goals and planning showed increased positive affect and less psychological distress following 9/11 (Holman & Silver, 2005).

1.3. Interactive effects of subjective age and subjective nearness to death

Our main goal is to address the interactive effect of the aforementioned two time perspectives on PTSD symptoms. As opposed to chronological age, where one's age is a single non-subjective value, which changes at a constant rate from birth to death, subjective indices of time are stochastically independent. One can have a young subjective age and feel near to death and vice versa; one can have a very old subjective age and yet feel further away from death. To the best of our knowledge, only one study (Shrira, Bodner, & Palgi, 2014) has utilized this advantage of this independence to empirically measure the interactive effects of these measures. Shrira et al. (2014) have shown that the coupling of feeling near to death with an older subjective age was associated with high psychological distress. In addition, a younger subjective age mitigated the detrimental effects of feeling near death on psychological distress. Shrira et al. (2014) suggested that subjective age is a time perspective measuring how much time has passed whilst subjective NtD is a time perspective, which focuses on how much time is left. Shrira et al. (2014) found a moderate correlation between these two time perspectives, suggesting that they are relatively independent from each other. In the current study, we wish to extend Shrira et al.'s (2014) study by addressing the effect of this interaction on the aftermath of exposure to trauma as opposed to general distress. In summary, we propose that a young subjective age addresses one's perception of one's resources mainly in relation to previous and present tasks, whereas subjective NtD reflects one's perception of one's resources mainly in relation to future tasks. In both cases, a relative depletion of resources should be manifest by the coupling of an old subjective age with feeling closer to death.

1.4. Overview of the current studies and predictions

In light of the above review, we make three predictions. First, we expect that each time perspective will be related to PTSD symptoms, namely, an older subjective age will be associated with higher PTSD symptom levels. Similarly, subjective NtD will also be associated with higher levels of PTSD symptoms. Second, based on the above theoretical outline, whereby each of these time perspectives reflects a resource of a different nature, i.e., resources used to cope with past and present (subjective age) and future events (subjective NtD), the coupling of these two time perspectives should interact. Namely, the positive futuristic outlook embedded in a larger distance-to-death time perspective should mitigate the relationship between an old subjective age and more trauma-related symptoms. We further predict that the coupling of an old subjective age together with feeling nearer to death should be associated with the highest level of PTSD symptoms, as this should signify that more resources have been depleted.

For replication purposes, we tested our hypotheses in two samples of Israelis that were exposed to missile attacks or sporadic terror attacks, events which have been associated with increased PTSD symptoms (e.g., Besser, Neria, & Haynes, 2009; Kutz & Dekel, 2006). In Sample 1, we addressed PTSD symptoms in the context of the 2014 Israel-Gaza conflict, and in Sample 2, within the context of the 2015 escalation in the Israeli-Palestinian conflict, which began in September 2015, and has not yet abated months later. In each sample, we used a different measure of PTSD symptoms (see Method sections).

2. Sample 1

In this sample, we examined PTSD symptoms in Israeli civilians following the 2014 Israel-Gaza conflict, during which >4500 missiles were fired on 70% of the Israeli population.[1]

[1] http://en.wikipedia.org/wiki/2014_Israel%E2%80%93Gaza_conflict.