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Research report

Disentangling Sense of Coherence and Resilience in case of multiple traumas

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ABSTRACT

Background: Depressive and anxiety disorders (DAD) are a major public health problem. Trauma endured during childhood is known to increase the risk of DAD in adulthood. We investigate the hypothesis that Sense of Coherence (SOC) is a mediator between childhood trauma and depressive and anxious symptoms (DAD) in adulthood. We also explore the nature (personality trait or aptitude) of SOC and attempt to disentangle the concepts of resilience and SOC.

Method: Former hidden children (FHC), the Jewish youths who spent World War II in various hideaway shelters across Nazi-occupied Europe, were compared with a control group. In each group we measured the presence of multiple traumas, the resilience with the Resilience Scale for Adults, the DAD with the Hopkins Symptoms Checklist and the SOC with the SOC-13 self-report questionnaire. We tested a mediated moderation model with childhood Trauma as the predictor; Adulthood trauma as the moderator; SOC as the mediator; and DAD as the outcome variable.

Results: Results were consistent with a sensitization model of DAD partially mediated by SOC. A first component of SOC was similar to an aptitude and another part of SOC was more similar to a personality trait.

Limitations: We are unable to differentiate if the sensitization process is a consequence of the nature of the trauma endured by FHC (long-standing exposure to extreme external events) or a consequence of the fact that this first trauma occurred during childhood.

Conclusion: Our results could account for the controversial debate regarding the life time stability of SOC.

1. Introduction

Depressive and anxiety disorders (DAD) have become a major public health problem in Western countries. For example, in the USA, lifetime prevalences of DAD are 28.8% and 20.8%, respectively (http://www.nimh.nih.gov/index.shtml). Therefore, an accurate understanding of the risk and protective factors influencing the occurrence of DAD is of crucial importance for both medical and economic reasons.

Trauma endured during childhood is known to increase the risk of DAD in adulthood (Terr, 1991; Wingo et al., 2010). Moreover, given that 34% of men and 25% of women in the general population have experienced two or more traumatic events during their lifetime, understanding how people cope with multiple traumas is of particular interest (Kessler et al., 1995). Many studies converge to a sensitization model (Breslau et al., 1999; Green et al., 2000; Sullivan et al., 2009), which implies a reduction in resistance to additional stress following previous exposure to trauma.

Several scholars underlined the link between multiple traumas and DAD (Follette et al., 1996; Suliman et al., 2009). Both teams of researchers showed that DAD positively correlates with the number of traumatic experiences. However, several questions remain unanswered: do humans possess skills that might help them cope with trauma? Are these skills personality traits or aptitudes? In other words, can these skills be trained by therapeutic interventions or impaired by negative life events? Answering these questions may bring several clinical implications. On the one hand, training or restoring aptitudes appear to be relevant for therapy sessions. On the other hand, modifying personality traits, which are considered to be stable after a time of maturation (McAdams and Pals, 2006), seems less feasible.

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Assessing the way people cope with trauma can be done by several theoretical ways. However, two major concepts of adaptation to stress or trauma emerge from the literature: Sense of Coherence (SOC) (Antonovsky, 1987) and resilience (Werner et al., 1971).

Both health and stress researches initially considered the stress factors as problematic negative events in the people's life. In contrast, Antonovsky (1987) stated that disease and stress are challenges, that they occur everywhere and all the time and that it was surprising that organisms were able to survive with this constant mass exposure. His conclusion was that chaos and stress were part of life and natural conditions. Therefore, the interesting question was: how can we survive in spite of all this? The fundamental contribution of Antonovsky was to raise the philosophical "salutogenic" question of what creates health and to search for the "origin of health" rather than to look for the causes of disease in the pathogenic direction (for a review, see Lindström and Eriksson, 2006). According to this salutogenic theory, health is seen as a movement in a continuum on an axis between total ill health (dis-ease) and total health (ease) (Eriksson and Lindström, 2011; Lindström and Eriksson, 2005). As underlined by Eriksson et al. (2007), Antonovsky formulated the movement towards good health in terms of general resistance resources (GRRs) and SOC. A GRR is a physical, biochemical, artifactual-material, cognitive, emotional, valued-attitudinal, inter-personal-relational or macro socio cultural characteristic of an individual, primary group, subculture or society that is effective in avoiding and/or combating a wide variety of stressors (Antonovsky, 1987). SOC is as a global orientation to view the world and the individual environment as comprehensible, manageable and meaningful, claiming that the way people view their life as a positive influence on their health (Eriksson and Lindström, 2005). SOC is a resource that enables people to manage tension, to identify and mobilize the GRRs to promote effective coping by finding specific solutions to specific problems.

The link between SOC and DAD is well known. Eriksson and Lindström (2005, 2011) emphasized a negative correlation between SOC and DAD; more specifically, in the case of stressful life events, high levels of SOC predict fewer DAD occurrences than do low levels. Nilsson et al. (2010) emphasized the link between SOC and well-being, showing that higher level of SOC concurred with high level of well-being. Braun-Lewensohn and Sagy (2014) show a negative relationship between SOC, anger, psychological distress, and anxiety among a population of exposed to missiles attacks. Braun-Lewensohn et al. (2011) emphasized that SOC was a mediator between trauma and DAD.

However, a theoretical debate surrounds the concept of SOC and relates to deciding whether SOC is a personality trait or an aptitude. Initially, Antonovsky (1987) conceptualized SOC as a life orientation that develops through maturation and life experience and becomes stable once having grown strong. But, according to Antonovsky, if SOC does not grow strong, it does not stabilize.

Several scholars (Eriksson and Lindström, 2011; Feldt et al., 2000; Kivimäki et al., 2000) report a stable level of SOC over time. Later, Feldt et al., (2007) provided evidence that SOC correlates strongly and negatively with the Big Five Neuroticism personality trait ($r=-.85$) and therefore considered SOC to be similar to a personality trait. In the study of Smith and Meyers (1997), the magnitude of correlations between SOC and other personality measures suggested that all of the variables seemed to be measuring the same core construct.

In contrast, according to several researchers, the level of SOC either increases (Larsson and Kallenberg, 1996; Nilsson et al., 2010; Smith et al., 2003) or decreases (Nilsson et al., 2003) in older individuals. SOC also gets worse following the accumulation of health problems (Caap-Ahlgren and Dehlin, 2004; Nilsson et al., 2003). SOC could also be altered by negative life events (Braun-Lewensohn and Sagy, 2010; Snekkevik et al., 2003; Schnyder et al., 2000; Volanen et al., 2007). Considering this, these authors suggest that SOC is not merely a proxy measure of a personality trait, but rather a partially independent, general measure of a person's worldview, related to an aptitude.

Resilience is the second major concept of coping strategies against adversity. It is defined as the process of adapting to significant sources of stress or trauma. The link between resilience and DAD is also well established. For example, resilience correlates negatively with DAD and predicts fewer DAD following stressful life events (Friborg et al., 2006; Hjemdal et al., 2006; Pietrzak et al., 2010; Roy et al., 2007; Wingo et al., 2010). Wingo et al. (2010) highlighted the moderating effect exerted by resilience on the relationship between childhood trauma and depressive symptoms in adulthood.

In a recent paper, Fossion et al. (2013) addressed the sensitization mechanism described above. This sensitization phenomenon occurs when people are facing multiple traumas with at least one previous trauma that overwhelmed their adaptation skills (Breslau et al., 1999; Fossion et al., 2014; Green et al., 2000; Sullivan et al., 2009). Fossion et al. (2013) link multiple traumas and DAD, by proposing a model based on the concept of resilience. They showed that the relationship between multiple traumas and DAD was mediated by resilience: facing multiple traumas damaged the ability to be resilient, which in turn resulted in a higher level of DAD.

A current debate addresses the possible overlap between SOC and resilience (Eriksson and Lindström, 2011; Lindström and Eriksson, 2006). Lindström and Eriksson (2006) emphasized that SOC and resilience are two concepts with theoretical and empirical overlaps, suggesting that they could represent two sides of the same coin. But more recent researches (Eriksson and Lindström, 2011) show that they are two different concepts, both contributing to a good health development. Similarly, Lundman et al. (2010) underline that resilience describes what facilitates people bouncing back after negative experiences, while SOC describes what facilitates people moving towards the mental health end of a health (ease)-disease continuum.

If resilience and SOC are similar concepts, then the sensitization mechanism that we showed for resilience would be observed for SOC. Following this perspective, SOC would enhance coping for traumatic events but could be eroded by traumatic events. At the opposite, if SOC is a personality trait, this mechanism should not be observed, as SOC should be stable over time, even when multiple traumas occur.

In sum, the present paper aims to (a) test the hypothesis that SOC is a relevant explanation of the sensitization mechanism (Hypothesis 1), (b) further explore the nature (personality trait or aptitude) of SOC, and (c) disentangle the concepts of resilience and SOC.

2. Methods

2.1. Participants

The work described in this article has been carried out in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans. All participants provided informed consent after the procedure had been fully explained. To approach the question of multiple traumas, we choose a homogenous first trauma during childhood and measured the occurrence of secondary traumas later in the participant's lifetime. The impact of the first trauma during childhood was assessed in a sample of former hidden children (FHC). FHC were the Jewish youths who spent World War II (WWII) in various hideaway shelters across Nazi-occupied Europe. The wartime circumstances of Nazi persecution included the traumas of (a) forced separation from family and friends, many of whom were killed (Krell, 1993); (b) poor caretaking; (c) impairment in