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Linking Trauma to its Resilience: a Categorical Analysis of Traumas and Their Specific Resilience/Prevention and Treatment Factors

Abstract

Although there are many potential trajectories following a traumatic event, resilience has been shown, for the majority of people, to be the modal outcome. However, what are the factors that enable individuals to do so, while others develop PTSD, for example? Additionally, given that there may be different types of resilience necessary depending on the situation, what are the specific factors in different potentially traumatic events (PTE) that promote resilience; conversely, what are the individual factors in different PTE's that make that situation particularly vulnerable? Understanding the specific factors that contribute to resilience in a given situation can not only help individuals rebuild themselves after trauma, but, perhaps prevent the gravity of the trauma in the first place. Just as no PTE is identical, the resilience needed to combat it is not identical, and the potential trajectory for trauma post-PTE is not identical. Therefore, three different PTE's will be examined for their unique dynamics, difficulties, and resilience factors.

Linking Trauma to its Resilience

Throughout the lifespan an individual encounters a variety of different circumstances and scenarios. One such category of scenarios are those that are potentially traumatizing; people experience at least one life-threatening or dangerous event over the lifetime (Portnoy, et al., 2018). These can include scenarios such as sexual assault, loss of a loved one, a national tragedy, or getting into a car accident. After any of these scenarios, there are many psychological trajectories a person may continue on. One such unfortunate trajectory is that of trauma.

Throughout the literature there have been numerous ways of defining trauma: some definitions include a life threatening event; while others, a more general, vicarious event witnessed; and some not necessitating a dangerous event at all, and rather focusing on the loss of a feeling like integrity. Although some definitions of trauma include the witnessing or enduring of a dangerous event, those who lost a loved one, a non-dangerous event, can experience PTSD (“Post-traumatic stress disorder,” n.d.).

Perhaps a way to explain the vast differences in terms of definitions of trauma is that a given definition is based on the conceptual framework that a person believes in, the framework through which you see trauma (Kira, Fawzi, & Fawzi, 2012). For example, the following are three different conceptual models of trauma that therefore come with different definitions: the model of trauma that focuses more on PTSD and on the “survival type” of traumatic stress, defines trauma as “an event that involves actual or threatened death or serious injury or a threat to the physical integrity of self or others”(Kira, Fawzi, & Fawzi, 2012); both the psychoanalytic model, which focuses on negative childhood experiences and/or neglect, and the intergroup model, which focuses on discrimination, nationality based experiences like targeted genocide among different cultures and nationalities, define trauma as the mental process in which a

person's sense of self and how they see the world starts to completely disintegrate. This definition follows their conceptual framework for trauma, says Kira, Fawzi and Fawzi (2012): the psychoanalytic and intergroup model of trauma categorize trauma as "internal or external events that threaten the person's physical, personal, or social identities and this/her basic autonomy or dependence needs and have potential of yielding different symptoms that may include PTSD, and other syndromes(and not only PTSD)."

As explained above, the definition of trauma is not clear cut. The literature has answered that there is no one type of trauma, which is perhaps why it is hard to fit it into one definition; rather, there are a number of different categories of traumas given that the nature of each trauma is different. For example, the development-based traumatology framework (DBTF), a more recent framework developed to encompass multiple areas of stress and trauma literature (the impact of the severity of the stressor, its chronicity, the time and place these both take place in a person's life, a one-time stressor vs. continuous stressor, etc. all factors that were not part of the framework beforehand) (Kira et al., 2013), identifies four distinct categories of traumas: attachment traumas in early childhood, identity trauma in adolescence or adulthood, survival traumas and secondary/interdependence traumas (Kira, Amer, & Wrobel, 2013). The DBTF model also identifies four distinct types of traumas: Type I is a one-time event, like a car accident; Type II is more complex in that it was a past, ongoing event but in the present no longer continues, like child abuse; Type III is ongoing and involves both direct/intentional and indirect/unintentional "micro and micro aggressions," like racism; Type IV is known as the cumulative trauma type, where a person has experienced multiple traumas, sequentially or simultaneously, and the most recent for example may have just been the one to "break the camel's back" (Kira, Amer & Wrobel, 2013).

As illustrated above, there are multiple ways to categorize different traumas, based on their level of stress, chronicity, timing in the person's life, etc. and based on the basic fact that each trauma has different components. But what are the factors that differentiate a potentially traumatic situation from that of an average scenario? For example, if a person stubs their toe, they may experience extreme pain, but it is highly improbable that a person has ever developed PTSD from such an incident, although it caused much physical pain. On the other side of the coin is, for example, the loss of a loved one, which does not cause the individual any personal physical pain, and yet loss of a loved one is considered a potentially traumatic situation. What factors create a potentially traumatic event (PTE)?

There are several factors present in PTE that make them potentially traumatic. It is in order to mention that it is important to label a situation *potentially* traumatic and not traumatic, as there is no situation that will necessarily cause trauma (Bonano & Diminich, 2013). One element may be whether harm was caused based on intent, for example, a terrorist attack or a sexual assault. Situations in which an individual or many individuals were harmed or wronged because another person intended it brings with it an additional sense of fear and intimidation (Neria, DiGrande, & Adams, 2011). In contrast to terrorism, says Neria, DiGrande & Adams (2011), a natual disaster is not as sudden and unpredicted, and is not caused by anyone's ill will. Another aspect that creates a PTE is when it is unsuspected: 9/11, for example, was particularly impactful because the attack occurred during a time of "peace," people were completely unsuspecting (Freedman, 2004). In a similar vein, Shalev (2004) says that what contributes to someone having PTSD symptoms is when the "unthinkable" happens, something we were not prepared for. Other factors present in a traumatic situation may be being exposed to an event where death or severe injury was a possibility, or a situation where the person had a response of

horror and/or helplessness (Neria, DiGrande, & Adams, 2011). The differences inherent in each potentially traumatic situation can affect the psychological trajectory following exposure or experience of the given event (Neria, DiGrande, & Adams, 2011).

These are just some of many factors that create potentially traumatic situations and set it aside as a unique situation from others. However, encountering a PTE's does not necessitate the development of trauma. Thus, once a person encounters a situation with one or a combination of these factors, what happens next?

There are many trajectories that a person may encounter post-PTE. Bonano (2004), for example, proposed four potential trajectories following trauma: a resilient period, where there are symptoms initially after the event, but then goes back to normal; recovery course, where the moderate to severe symptoms go away after a few weeks or months following the incident; chronic impairment trajectory, where severe symptoms do not dissipate in the weeks and months following; and delayed distress course, where, although the person didn't experience distress initially after the event, after time post-event symptoms seem to be increasing (Bonanno, 2004).

Other trajectories could be recovery, relapsing/remitting, delayed dysfunction, and chronic dysfunction (Norris, Tracy, Galea 2009). Recovery, by definition, is different from resilience in that it takes more time to return to pre-event status (Norris, Tracy, & Galea, 2009). There are other possible trajectories that are similar to resilience, like that of what is called posttraumatic growth (PTG), which is defined has been defined as "positive psychological change experienced as a result of the struggle with highly challenging life circumstances (Nishi, Matsuoka, & Kim, 2010)." The difference between PTG and resilience is that while resilience is generally defined as the ability to cope with stress in the face of adversity, and resilience emerges at the moment of the situation, posttraumatic growth is post-facto: it is the ability to

experience positive psychological growth after the experience as a result of being able to learn from the situation. (Nishi, Matsuoka, & Kim, 2010).

Another possible trajectory following a trauma may be that of post-traumatic stress disorder (PTSD). PTSD is generally defined as a category of symptoms, particularly the categories of intrusion (intrusive thoughts, flashbacks, nightmares), avoidance (avoiding physical stimuli reminiscent of the trauma or suppressing thoughts related to the trauma), and change in affect (becoming more hypervigilant, easily scared, depressed, engage in self blaming, sudden outbursts, etc.) (Padmanabhanunni & Edwards, 2016). The relationship between being introduced to a traumatic event and developing PTSD has been said to heavily involve cognitive schemas; PTE tests a person's schemas about the world, particularly in the areas of safety, trust, power/control, esteem and intimacy (Write, Collinsworth & Fitzgerald, 2009). Additionally, according to the emotional processing theory of PTSD, those who have more of a tunnel vision, or "rigid" way of looking at the world and individual beliefs are more likely PTSD (Grady, et al., 2018).

Additionally, the development of PTSD post-PTE has been considered highly related to whether a person has a current clinical impairment, and how severe that impairment is (Hauck, Schestatsky, Terra, Leticia and Lucia, 2007). All of these factors highlight that it is not necessarily the event, but rather a person's current state that leads them to that specific appraisal of the event, that makes them more likely to be traumatized. In other words: "fear is biological, but it is also influenced by subjective interpretation, which depends on the person's history (Yehudah, 2004)."

However, there is another trajectory that is taken, called by some as the most common trajectory (Raghaven & Sandanapitchai, 2019; Bonano, 2004; Portnoy, et al., 2018; Galatzer-

Levy, Huang, & Bonanno, 2018): resilience. Resilience is defined in a number of different ways: positive adaptation in the face of adversity or trauma (New, et al., 2009); the ability for a person to be able to shield him/herself of risk effects and simultaneously be able to achieve "normative development" post-PTE (Ponce-Garcia, Madewell, & Brown); what occurs when protective factors (commonly factors like strong family structure, social and economic stability, characteristics like intelligence and flexibility, and others) act to protect the individual from the potential risk factors associated with the situation, and to counteract those problematic factors (Masten, 2009).

The different definitions of resilience perhaps are an outcome of the fact there can be multiple times of resilient reactions, depending on what situation the person has emerged from: There is resilience in the face of trauma, resilience in the face of stressors, emergent resilience, minimal-impact resilience, etc. (Kennedy et. al, 2018).

Resilience is not the lack of symptoms of distress: rather, those with resilience do experience the normal symptoms of sadness, anxiety, but for mild period of time, and then there is a return to normal functioning (Steenkamp, Dickstein, Salters-Pedneault, Hofmann, and Litz, 2012). In other words, resilience is a process that includes a recovery period and a subsequent sustainability period, utilizing or developing the skills necessary to move forward (Grady et al., 2018). What arises from the research is that resilience is a distinct trajectory from recovery, in that in recovery, there is typically a several month period of acute symptoms and then a gradual return to normalcy. In resilience there is a relatively small period of symptoms experienced before returning to pre-event functioning (Bonano, 2004).

Given that potentially traumatic situations are *potentially* traumatic, meaning no one situation necessarily causes a trauma: What are the factors present in resilient people that enable

them to take the resilient trajectory post-PTE, whereas some do not? If many people encounter a traumatic situation, and continue on healthfully, what are the factors that allow them to do so in that given situation? If we can determine this, maybe we can help a) prevent people from experiencing trauma by inculcating these factors, if possible, beforehand b) provide directed treatment post-facto by utilizing strategies informed by a deeper understanding of what specific factors contribute to that specific trauma, and therefore what specific factors of resilience are necessary to proceed in each situation.

For example, if a student lives in a high crime area, and there is knowledge about the traumas that given their environment, they are vulnerable to develop, understanding what specific characteristics they need to develop the resilience to combat those specific PTE's may assist in preventing the development of a negative trajectory.

Hauck et. al, (2007) notes that trauma is not "all or nothing:" it is a process, and there can be interventions at several points along the way, especially in the acute stage post-trauma. However, the crucial question that remains is: what type of intervention should be used, what is the specific goal with a given trauma (Hauck et al., 2007)? The literature on trauma illustrates a need for greater specification in terms of trauma treatment and prevention (Hauck et al., 2007). Indeed, Griffith & West (2013) note that many resilience training for military personnel failed because while they try to cultivate general protective cognitive factors for resilience, like self-awareness and improving social support, these are not the factors relevant to the type of resilience military personnel require. This illustrates that common resilience factors and treatments like strong social and family networks; strong socioeconomic status; education; and positive outlook on self and the world, for example, are not necessarily helpful protective or treatment factors for every trauma. Rather, because each trauma is different, perhaps the

resilience factors necessary to prevent or overcome that trauma may be linked to that trauma, and thus are specific to a degree.

By linking a trauma to specific factors necessary for resilience in that given PTE, perhaps this can contribute to the literature in ensuring that each trauma is treated differently, and therapy or prevention includes building the specific skills needed to grow from that given PTE.

Sexual Assault/Rape

It has been said that the more common modal for victims of sexual assault (SA) is recovery, not resilience (Steenkamp et al., 2012). Steenkamp et al., (2012) argued that resilience was not the modal outcome with victims of (SA) because this specific trauma relates directly to the victim's body; and resilience can only help with vicarious trauma. However, Bonano (2013) argues with Steenkamp et al., (2012) in his article, saying that the most common or modal trajectory is "almost always a resilient pattern of stable health and well-being" (Bonanno, 2004). Bonano notes that Steenkamp et al., (2012) only came to his conclusion because he had a very small sample size: this, he says, is a result of the fact that a unique aspect of trauma occurring from SA, as opposed to other traumas, is that there is stigma involved with SA, and victims do not always want to make themselves known in the fear of being blamed. I will note that despite Bonanno's comment, it was difficult to find articles about SA survivors and resilience; most articles focused on SA survivors and PTSD.

These researchers disagree over the common trajectory, however, they both agree that sexual assault has a unique aspect to it: unlike any other violent attacks and traumas, these victims often make the tragedy into a secret because they may feel a sense of blame and embarrassment, and may not reveal themselves. This may be because of an aspect of society that blames the victim, saying that they brought the assault upon themselves; indeed, individuals

experiencing SA are also not likely to tell friends, loved ones, or the authorities (Ponce-Garcia, Madewell & Kennison, 2015). Rape has been associated with the highest frequency of PTSD (Padmanabhanunni & Edwards, 2015), which is not surprising given that sexual assault is also known as a personal identity trauma (according to the DBTF framework), a subgroup of identity traumas; that naturally comes with its own intensive dynamics (Kira, Amer and Wrobel, 2013).

An element that may be specifically potentially traumatic to a sexual assault case is the severe degree of exposure, or contact, that individual has to the situation: it affects, and happened to, their own body, in contrast to witnessing a national tragedy or witnessing a loved one dying. Perhaps that is why victims of sexual assault develop particularly high rates of posttraumatic stress disorder (PTSD) compared to other traumas (Steenkamp, et al., 2012). Additionally acts of sexual assault are more common on people that are within the ages of 14 to 26 (Bitton & Ben David, 2014), a more sensitive time in life in terms of personal identity and fragility. What additional factors are there that cause trauma in victims of SA, and in a parallel fashion, what are the factors that promote resilience specifically in victims of SA?

When studying the associations between childhood sexual assault (CSA), cognitive styles and revictimization (experiencing another sexual assault later life), Walsh, et. al., (2007) found that CSA was linked to sexual revictimization in adulthood. Walsh et al., (2007) noted that when a CSA occurs, the incident in itself can make a person more vulnerable, as it can create relationship insecurity, self-blaming attributions and lessened self-efficacy. These vulnerabilities increase the likelihood of another assault happening in adulthood; indeed, 75% of women who were sexually abused as children reported having at least one non-consensual sexual experience in adulthood (Walsh et al., 2017). The participants for the study were female college students.

They completed questionnaires that measured their locus of control (LOC), coping styles, self-efficacy, and answered questions that assessed their CSA and adult assault.

While the results showed that whether or not the participant had a CSA was the greatest indicator of whether an assault would happen again as a result, participants that demonstrated positive coping methods and high LOC were associated with resiliency to coercive sexual assault. The author notes that these results have clinical implications, in that therapy for victims of SA should specifically work on strengthening their LOC and positive coping styles. Indeed, there is a strong implication in the fact that LOC and self-efficacy greatly differed between women that had and did not have sexual assault experiences. Perhaps this directly shows that sexual assault lowers these factors and therapy must focus on this, and, preemptively, young girls should be specifically inculcated with these resilience-promoting factors, given that they may be a vulnerable population to this PTE.

Hauck, et al. (2007) studied whether parental bonding was a factor that promoted resilience amongst female rape victims. Given that as Yehudah (2004) stated, that the development of trauma rarely has to do with the given situation and more so with the factors that preceded it, like relevant childhood information or present clinical issues, the authors suggested that lack of, or disturbed, parent-child relationships may contribute to the development of PTSD post-rape. And conversely, positive, strong parent-child relationships may be a protective factor that promotes resilience. Results showed that those that perceived they have less “effective” parents were correlated with impairment overall and specifically higher rates of PTSD.

The study evaluated female rape victims’ self-reported relationships with their parents using the PBI which measures a variety of scales of affection and control/protection. PTSD symptoms were measured using the Davidson Trauma Scale (DTS). The authors note that one

way of understanding the data is that childhood is where schemas are formed; if a person had ineffective, cruel, apathetic, etc. accordingly, and the SA may simply reinforce the schemas that there is no one to help them, to care about them, or that the world is a dangerous place (Hauck et al., 2007). The authors specifically note Seligman's learned-helplessness theory in application to their study: if a person's parents were inattentive, abusive, etc. since they were a child, a person may have developed a hopeless feeling for all future events which may make it difficult to overturn the effects of trauma. Additionally, the results could have been due to support: parents are a significant source of support, and if a person doesn't have parents to support them after an event, this could heighten the symptoms and lead them down a trauma trajectory (Hauck et al., 2007).

Ponce-Garcia, Madewell, and Brown (2016) looked at differences in how men and women react to sexual assault in order to examine what specific protective factors promote resilience for each population. Participants were between the ages of 18 to 25 and were recruited from different universities and included men and women that both were and were not sexually assaulted. The SPF was used to measure factors that are associated with resilience, like social support, goal efficacy and social skills, and depression and anxiety was measured using the HADS scale. Results showed that women that did not experience a sexual assault typically scored higher in the area of social support, which is a protective factor that promotes resilience, than men; but women in the SA group scored lower on the social support scale than men (Poncei-Garcia et al., 2016). This may imply that post-SA, women experience a sharper decline in social protective factors following SA than men. This may be due to the fact that women are more likely to report such assaults and thereby may incur more victim blaming (Hauck, et al., 2007). Results also showed that women had higher rates of anxiety whereas men had higher rates

of depression. Interestingly, this may support results that are found elsewhere, that there is a higher rate of anxiety-disorders for women than men (Barajas & Scheching, 2017).

The idea that social support seems to decline for women after SA may be in line with what was said previously, that often SA feel that they are to blame (Hauck et al., 2007); research should look into whether this is different for men and why; whether they too engage in equal amounts of self-blame; and whether this makes them more resilient. Additionally, research should look into whether the fact that men experience depression post-SA, while women experience more anxiety post-SA, has clinical implications for treatment. Perhaps this study, combined with the results from Hauck et al., (2007) illustrate the importance of social support, pre and post-SA: perhaps an important clinical implication, and preventive factor, is ensuring that victims as well as those who are vulnerable to SA have people that they can talk to and confide in.

However, in a study done by Padmanabhanunni & Edwards (2015), researchers found that speaking about the event in and of itself is not what is healing for victims of SA. Researchers evaluated nine rape victims that experienced a “Silent Protest,” a march for female rape victims whose goal is to show support for fellow victims and spread awareness. Many studies have suggested that speaking about the sexual assault is helpful to SA victims, given that often they do not disclose to the public or those in their personal life the event that occurred, and suppressing this is often detrimental (Padmanabhanunni & Edwards, 2015). Thus, they wanted to study the range of reactions of these attendees, and whether having the ability to speak out and disclose was helpful in terms of healing.

Results indicated that many of the symbolic acts used during the March that have been said by some survivors to be healing, like taping their mouth shut to illustrate how many women

do not disclose the assault; lying on the floor to represent SA victims that died as a result of rape; or wearing shirts that say survivor. However, to other survivors, these symbolic acts were found to be distressing, even re-traumatizing. For example, many of the women listed feeling ashamed, disgusted and embarrassed as feelings they had when they wore the shirt.

Why did some women experience re-traumatization while some experienced the march as freeing? Researchers found that women that have not yet fully processed the trauma and integrated into their consciousness, as opposed to it being relegated to “intrusions” like flashbacks and nightmares which triggers their avoidance, are negatively impacted by these parades; for victims that have not yet dealt with the trauma on psychological level, the march is like any stimuli that serves as a reminder of the assault. On the other hand, women who have already attended therapy and processed the trauma, enjoy the ability to speak out further and engage in symbolic acts of their difficulties (Padmanabhanunni & Edwards, 2015).

Perhaps this has major clinical implications: disclosure in and of itself isn't helpful. In fact, forcing the client to speak about the trauma before they have processed it and comes to terms with it can lead to retraumatization; speaking SA about SA does not lead in and of itself to recovery (Padmanabhanunni & Edwards, 2015). The first step for victims of SA is not continuously speaking about the event, rather it is helping them to process it and integrate it into their consciousness (Padmanabhanunni & Edwards, 2015).

SA differs from other traumas and thus includes distinct traumatizing factors, like the intense individual involvement it has, as well as unique resilient factors, like social support. Factors like LOC, self-efficacy, and positive coping skills have been associated with promoting resilience in SA victims (Walsh, et. al., 2007). Therefore, prevention, resilience promotion, and therapy perhaps should focus on these factors.

Additionally, common cognitions felt in victims of SA are those of helplessness, alienation, self-blame, guilt, and disgust, which is often why these victims make their suffering a secret (Padmanabhanunni & Edwards, 2015). It seems that the result of SA causes degrading in social relationships and interactions (Padmanabhanunni & Edwards, 2015). This continues a vicious cycle that leads to lack of social support, which may be what these victims need most.

Padmanabhanunni & Edwards (2015) noted that the first and most effective step therapeutic treatment for rape survivors is to ensure safety and stabilization in the clinical environment. The second is integrating the trauma into normal life and back into the conscious experience in a normal way, as well as addressing maladaptive cognitions such as “the world is an unsafe place, or “I can never trust again.” The third step is learning to live beyond the trauma and enhancing social bonds.

Hauck et al. (2007) suggested that given that childhood is where schemas develop, if SA victims had parents that were highly critical, apathetic, neglectful, etc., in therapy it might be important to readapt the victim’s schemas. If a person had very anxious parents, a sexual assault may have just verified the idea that the world is an unsafe place and contribute to the trauma (Hauck et al., 2007). Additionally Hauck et al., (2007) demonstrated the importance of social support and support systems for victims of SA. Therefore resilience factors for these victims may be LOC, self-efficacy, social support, and realistic schemas about the world.

Soldiers/Veterans/Military

Trauma has been described as a situation in which a person does not feel he/she has the resources to cope with the stress; military service is often a situation of this nature, with extremely sudden and frightening scenarios never encountered before, making it easy for an individual to feel like he/she cannot cope (Thompson & Dobbins, 2018). Indeed, while on

military deployment, soldiers leave their families and other support systems, and are constantly moving to new places (Rice & Liu, 2016); they also generally lack basic needs, like sleep, and are often in constant discomfort (Senesh, 2017).

Another PT factor is that those in the military face is many "unthinkable" moments: Orr, McNally, Rosen, & Shalev (2004) note that a factor present in the PTSD trajectory is when a person experiences what they call unthinkable moments, a scene or situation that a person may not have been able to conceive of existing previously.

For example, when interviewing past soldiers from Vietnam, researchers note that it was these images of the "unthinkable" that impacted them most: having buried babies caught in crossfire or trying to resuscitate a best friend (Orr et al., 2004). In both situations, as well as many incidents in the military, the soldier himself was not injured, which highlights the idea that trauma can be vicarious.

Researchers have taken advantage of the fact that as opposed to many other PTE which are sudden and unplanned, we are in a unique situation with soldiers: deployment is planned. That is why numerous resilience training have been tested and tried to be implemented on those in the military (Thompson & Dobbins, 2018).

Thompson and Dobbins (2018) conducted a literature review regarding the effectiveness of various resilience training on soldiers, both pre and post military service. The conclusion of the majority of these studies was that the training was not effective long term, except interventions that focused on post-army soldiers (Thompson & Dobbins, 2018).

This conclusion was corroborated by Crane et al. (2018), who stated that resilience training with those in the military have not yielded significant results over time. Generally, these training sessions have focused on psychoeducation, cognitive restructuring, and even working on

strengthening social support networks and relationships (Crane et al., 2018). Crane et al. (2018) proposed a different resilience training, where, instead of focusing on cognitive restructuring or behavioral skills, the training focused on self-reflection (examination of one's existing coping and emotion regulatory strategies, and reflecting on past difficulties and how the individual dealt with them) and coping skills. Researchers chose these two factors based on research that has demonstrated that part of building resilience is being able to be reminded of a stressor and how you performed under that stressor, evaluating whether your strategies were effective in a positive way.

The idea of self-reflection in this context is oriented around learning how to learn from past experiences. Reflection can lead to resilience because being able to make meaning out of difficulties has been a cognitive style related to resilience (Crane et al., 2018).

Participants were students from the Royal Military college, which trains military army officers, and cadets were randomly placed in the coping strategies group or the self-reflection group. Surveys were given throughout the process to measure anxiety and depression levels. Those in the SRT (self-reflection training) completed weekly guided writing sessions where they were asked to self-reflect. Those in the coping skills training (CST) received a one-time training on strengthening coping skills with the advent of a stressor.

In this longitudinal study, results showed that cadets in the (SFT) had higher levels of resilience than those in the(CST), and anxiety levels of the SFT group were drastically lower than the CST group. The results may imply that reflecting back on prior stressors creates the ability to make meaning out of a previous stressor and have the participant get into the regime of being aware of the ways they can deal with a stressor (Crane et al., 2018). In other words, cultivating the ability to make meaning out of past events is a particularly helpful resilience

booster, as evidenced in several other studies regarding those in the military (Afana et al., 2010; Bonano et al., 2002).

Given that multiple resilience trainings were tried on those post and pre military, and research showed that the results were not generally significant, Crane et al., (2018)'s results imply that a factor particularly helpful for those going into the military to boost resilience is the ability to learn to make meaning out of negative or stressful events. A question left unanswered is why this proved to be a particularly helpful skill for those in the military.

Another resilience-boosting training program that proved effective among military personnel was the Master Resilience Training, which focuses on cultivating optimism (positive yet realistic thinking), mental agility (ability to think flexibly and try new strategies in different stressful situations), self-awareness (being aware of thinking patterns, coping strategies, and that which is personally triggering), and character strength (how a person can utilize his/her particular strength to overcome a given challenge) (Griffith & West, 2013). Over the course of one week, participants were given a presentation on each of these factors, which was followed by group discussions and application exercises, and at the end of the week were given questionnaires to self-evaluate the skills they gained. Participants overwhelmingly rated the MRT program as helpful, and specifically noted that the mental agility training was the most helpful and practice for their service; statistically, optimism, self-awareness and focusing on making connections with others were the least helpful. The authors note that this could be why previous why many previous resilience trainings with the military proved ineffective in the long-term: they did not prove to be relevant or even realistic for the situations military members usually encounter, and may even be giving off a false sense of positivity that may be impossible to maintain (Griffith &

West, 2013). This study highlights the importance of being able to be cognitively flexible and adaptable for military personnel, as a factor in increasing their likelihood of resilience.

Rice & Liu (2016) conducted a study in which they evaluated resilience levels among veterans, and looked at the factors present in those that had higher levels of resilience. One factor found in those with higher levels of resilience was higher education, which has been supported by several other studies (Fossion, et al., 2014; Sweeney, et al., 2018). Researchers were unsure whether it is the educational level itself, or the associated health or socioeconomic status that comes along with it that is resilience-promoting; however, those with higher levels of education used less self-blame which may be the factor that promoted resilience (Rice & Liu, 2016).

One coping strategy of veterans associated with resilience was acceptance (accepting the presence of a stressor and inability to get rid of it), which they noted was especially important for those in the military, who are put in multiple situations where they have to acknowledge that they do not have control. This applies to what region they are placed in, who they work with, and the general environment around them (Rice & Liu, 2016). Another coping strategy found associated with resilience was positive framing (positive reappraisal and making meaning out of the event), and religion. Religious affiliation prior to being in the army was not a predictor, but, frequency of engagement in religious activities while in the army were significant predictors. Perhaps this is in line with the findings of Afana et al., (2010) which noted that those who were religious were often more able to make more meaning out of highly difficult predicaments.

Greater use of positive reframing and less self-blame was predictive of resilience; researchers found that those in the military who developed PTSD often engaged in self-blame. Researchers suggest resilience training for soldiers should focus on these positive reframing and decreasing self-blame (Rice & Liu, 2016).

It is not surprising that soldiers may engage in self-blame for the events that transpire in the army, including the loss of loved ones or civilians, given that for many soldiers army service is a crucial part of their identity (Brown, Antonius, Kramer, Root & Hirst, 2012). Soldiers take much pride in their service, to the extent that for many, it is ingrained in their identity for years to come. In a study designed to measure autobiographical memory, a group of soldiers showed up in full uniform, though it was many years after service. Researchers found that this group actually demonstrated more severe symptoms of PTSD, suggesting that when a trauma is linked to a person's identity, it has a much greater effect (Brown, Antonius, Kramer, Root & Hirst, 2012). This is similar in a sense to findings about why SA has a greater percentage of victims of PTSD because it is a personal identity trauma (Kira, Amer and Wrobel, 2013; Bitton & Ben David, 2014).

The idea that mental agility or cognitive flexibility is a skill of particular importance to soldiers is also discussed by David Senesh, a soldier in the Israeli army at the time of the Yom Kippur War, who was later taken captive in Egypt by the enemy, and later in life got his doctorate in psychology. In his article he describes, in retrospect, factors that made him and his fellow soldiers vulnerable to trauma, as well as protective factors that contributed to resilience; he mentions only the factors that were confirmed as true factors by Figley (1985, 1986). Senesh (2017) describes the ability to be cognitively flexible, the ability to view a situation in multiple ways and facets, as one that is crucial for the army.

For example, he relates that while in captivity, deprived of human contact and basic needs, constantly beaten and tormented by his captors, he decided to train himself to be grateful that they were keeping him alive, at least. This cognitive flexibility, says Senesh, is in a way the underlying key to many other protective factors, such as collective identity, or a strong sense of

belonging to the group. One that has a strong sense of purpose in the fact that they are part of a group and fighting for a united cause causes a person to view their discomfort and fear differently; they now struggle for a purpose, that which is lofty and important. Having cognitive flexibility allows a solider to make meaning of the situation (Senesh, 2017).

There seem to be large themes for clinical implications and preventive factors for those in the army. One such protective factor for soldiers is that of mental flexibility and the ability to make meaning (Senesh, 2017; Rice & Liu, 2016; Griffith & West, 2013). The ability to make meaning on the battlefield enables soldiers to not lose morale during the myriad of sudden and stressful situations they encounter by being able to create new strategies and think about different ways to handle the situation (Crane et al., 2018). Therefore, future resilience-training programs, like those that have proven to be successful, should continue to stress and inculcate in future soldiers this skill. Additionally, perhaps if a soldier develops a trauma-related disorder, working on the ability to make meaning and on mental agility could prove helpful.

Naturally, factors that make soldiers vulnerable to heading down a trauma trajectory are factors like leaving their social support network behind; constantly moving from base to base; lack of sleep; and constantly being in unpredictable situations (Rice & Liu, 2016). While it would probably be unrealistic to try and reduce the factors like constant traveling and increasing soldier's sleep, perhaps virtual communication with loved ones back home may reduce vulnerability; indeed, researchers found that difficult adjustment back to family like after being in service, because of long periods of lack of communication between the service member and their family, contributed to the development of trauma-type trajectories (Hinojosa, R., Hinojosa, M., Hognas, 2012).

Natural Disasters

The effects of natural disasters (ND) on the individual and community psyche are multifold. ND differ from the traumas mentioned above in that they inherently contain many simultaneous PTE's: impact on an individual's emotional and physical well-being; destruction of infrastructure, like schools, job, economy, etc.; scattering of family, friends and all social groups in an individual's life (Felix et al., 2019); and destruction of physical landscape, including homes, shops, and familiar places .

Additionally, ND are experienced simultaneously by many different individuals of varying age groups; each age group has specific needs when it comes to preventing and overcoming a PTE (Felix et al., 2019). For example, children and adolescents have been known to have a greater attachment to physical places that are lost during a natural disaster than adults (Leila, Cox & Fletcher, 2017). With many varying emotional needs, it is difficult to treat all adequately.

Because ND affects multiple areas of life, it is not uncommon for those in the affected areas to develop negative symptoms. For example, after Hurricane Katrina, 49% of people living in one of the affected areas developed an anxiety or mood disorder (Pollack et al., 2019). However, it has still been found that the modal outcome for survivors of ND is resilience (Bonanno, 2004).

Community is naturally an important part of the effects of ND; ND is a PTE like terrorist attacks, for example, in the sense that a large group of people concentrated in one area can experience simultaneously. Therefore, pre-disaster characteristics of a community are important in predicting communities and individuals' trajectories following the PTE. For example, lack of community structure, including everyday activities like work, school, socializing and even the lack of economic resources can have a significant effect on individuals' emotional and physical

health (Trip et al., 2018). There are many factors that can increase vulnerability in a community pre-disaster, like residential and economic instability and the concentration of disadvantaged minorities (Wickes et al., 2015).

Structural resilience of a community is one pre-disaster characteristic that has been shown to influence whether or not a community, and the individuals within it, may be successful in overcoming the effects of a ND (Weber et al., 2019). Structural resilience is similar to community resilience, which is generally defined as "positive adaptation to a change that extends beyond practical disaster response, resource management, or social networking" (Wickes et al., 2015), and is majorly influenced by the resources and structure of the community pre-disaster. Structural resilience can also be defined as a communities' skillset in or ability to utilize resources and experts to aid in the emergency (Ntonis et al., 2016)

Like with soldiers, an aspect unique to ND is that they are, to a certain degree, predictable. Although their specific timing is not necessarily predictable, certain areas are more prone to natural disasters, like communities along the Gulf Coast (Pollack et al., 2019). Therefore, many policy makers have called for resilience training in these areas. However, there remains a lack of empirically supported preemptive treatments or resilience trainings for individuals and communities vulnerable to ND (Pollack et al., 2019).

Powell & Leytham (2014) attempted a resilience-style training on a group of parents after a 6.3 magnitude earthquake in New Zealand in 2011. However, it was not done before or immediately after the disaster: rather, it was done in the recovery phase of the disaster, a few months post-earthquake, which is often when survivors are lacking in skills and support most (Powell & Leytham, 2014).

The workshop, The Caregiver JoH, focused on educating parents about the direct role they play in their child's development as well as their emotional needs, like mediating stress; learning how to reduce post-disaster stress; enhancing coping techniques, like breathing mechanisms and how to recognize personal strengths; discussing how to talk about risk exposure with children; and teaching about factors that promote children's' resilience. Additionally, other goals of the program were to build the parents' skillset in these areas as well build peer and social support between them.

Participants were parents of children enrolled in Children's Journey of Hope. A pre and post-test was given that measured the knowledge gained from the workshop as well as parents' stress levels. Results demonstrated that post-workshop, parents had a significant reduction in stress levels. Additionally, their scores in ability to identify social supports in their community, signs of stress, coping mechanisms and other skill sets increased. Although the study only measured the results of the parents' training, and not its effects on their children, the study demonstrates that the adults were able to learn skills related to promoting resilience that were effective in reducing their own stress levels, even after the disaster. This result is similar to what Hauck et. al, (2007) said: trauma is not "all or nothing,' rather there is a process that occurs and interventions can be helpful at multiple points along the way, especially once time has passed since the PTE. This study highlights that intervention is impactful not just in the immediate aftermath of an ND, but in the recovery period in which families are trying to transition back to "normal." Therefore, it should be remembered that treatment and prevention education is not just important or necessary pre-ND or immediately post-ND: learning skills to promote resilience can be helpful at many points along the way.

While Powell & Leytham (2014) specifically conducted their study at a time months after the ND, Felix et al., (2020) describes techniques used by mental health workers that promoted coping and resilience in the immediate aftermath of an ND. The authors were part of Operation Assist, a mission that dispatched mental health workers after Hurricane Katrina to visit the shelters survivors were living in. The Operation first began solely to deliver medical care, but was soon extended to psychological-trauma care. Although empirical evidence cannot necessarily be drawn from Felix et al., (2020)'s methods, the article notes a number of factors that gave immediate relief to families.

One potent factor noted by Felix et al., (2020) is that post-ND, routine of daily life is non-existent (Felix et al., 2020). School, work, parks, and homes are out of the picture, and many people are living in temporary homes or camps for displacement. The authors reported that many parents noted that their children were acting out, behaving in an erratic way they had not beforehand. When the authors helped parents establish a daily routine for their children in the shelters, they saw that the children's' acting out and erratic behaviors lessened (Felix et al., 2020). The researchers explain that routine provides a sense of safety amidst the chaos of change in every realm of daily routine.

As mentioned previously, PTE effect each age group differently: Felix et al., (2020) noted that in the shelters, toddlers often exhibited regressed behavior; young children started acting out and exhibiting behavioral problems; and older children often took on a parental-style role and felt a larger sense of responsibility, which made in turn created in them some of the nerves and anxious symptoms their parents had. Therefore, the psychologists worked with each age group in a different manner, instead of using family therapy as the modal treatment at that time.

Additionally, Felix et al., (2020) noted that for many, being given the opportunity to share their fears and struggles in a supportive environment helped to reduce some of the anxiety present, immediately. It seems that although this was not an empirical experiment, the authors on the ground post-Hurricane Katrina witnessed strategies that helped to immediately reduce symptoms of the PTE: helping families develop structure to daily living amongst chaos; working with each age group separately, and being attentive to their respective emotional needs; and creating a supportive and validating environment that survivors could share their feelings in.

Leila, Cox & Fletcher (2017) had a similar understanding of the different emotional impacts of ND according to age: The premise of their study was based on previous findings showing that children and adolescents are more attaching to “place” than adults. Therefore, the assumption was that an ND, which destroys “place,” would affect this age group to a greater degree in that regard, and therefore what underlies their resilience is important to understand.

These adolescents, affected by the 2013 floods in Southern Alberta, Canada, were asked to make three albums, photographing: 1) Important places related to their flood experience (positive or negative) 2) A place that brought them strength after the flood 3) An important place that was lost or damaged during the flood. Participants then discussed these photographs, specific feelings of loss, stories behind the photos, and reason for place-based strength in interviews by their peers. The areas evaluated were place-loss and change, place-based disaster and resilience. When the adolescents described the place created in the shelter, their terminology, affect and tone were hopeful and resilient. The researchers explained that using adolescents' specific attachment to “place,” and recreating a specific place for them within the shelters, helped them to escape post-disaster chaos and gain strength from a new place.

The researchers studied factors that underlie resilience in youth and adolescents following severe floods in Canada that caused community ruin and displacement and found that a common theme in the youth's interviews and photos that underlie their feelings of loss was that of lack permanence/routines and place permanence/dependence, meaning a unique connection to the place they are in. Additionally, another component that underlie youth's feeling of loss was their feeling of unstable identity. Researchers explain this is because "place" for youth is linked to identity, as place includes their schools, social networks, activities and families at a crucial time of identity development. Now that the place has been removed, their identity struggles (Leila et al., 2017).

Researchers theorized that just as place can be a great sense of loss for youth, it, therefore, also aids in recovery. Researchers created spaces for youth within the displacement shelters, where youth were able to engage socially and participate in recovery efforts The youth became very connected to that place, and when pictures were taken of these places by the youth, ther descriptive adjectives, tone and affect were noticeably positive.

This article demonstrates the importance, as mentioned by Felix et al., (2020) of recognizing the different emotional needs of different age groups post-ND. By providing youth with a space to socialize and engage in productive activities, activities they were engaged in pre-ND, their healing process may be aided by emotionally attaching to a new place. Additionally, the study raises an interesting theory of using what causes the greatest sense of loss in aiding in recovery: what the trauma removed, its specific resilience may need to replace.

In contrast to Leila, Cox & Fletcher (2017) who studied adolescents, Karlin, Marrow, Weil, Baum & Spencer, (2012) examined how psychosocial factors (demographics, social support, self-efficacy, resiliency, mood states, and age) mediated the relationship between how

individuals experienced ND in older adults. The study was mainly done on Peruvians who were of particular interest to the researchers, as Peru has low socioeconomic status (SES), and low SES has been noted to be a significant risk factor that can be a "barrier" to resilience (Karlin et al., 2012). The study was a continuation of a similar research question done on Hurricane Katrina survivors, and compared the data from that study to the data from the Peruvians post-disaster.

The authors found that on average, the Peruvian sample had lower levels of LOC, self-efficacy and negative affect post-disaster. The sample also commonly held the view that the earthquake was a result of "doing something wrong." Another strong emphasis across the sample was that the government did not do much to help (Leila et al., 2017). Indeed, a qualitative theme noted throughout the Peruvian survivors' responses was that they wanted assistance, and were aware that they needed certain tools and resources to move forward, but did not have the ability to do so given their extremely limited resources and little to no outside assistance.

In contrast, the Hurricane Katrina survivors had, on average, positive moods and higher levels of self-efficacy, and reported less mood states of anxiety, depression, etc. than the Peruvian sample. Additionally, Hurricane Katrina disasters noted receiving considerable support and assistance from the government and others (Karlin et al., 2012).

Self-efficacy was measured using three questions that were developed to measure the three main areas of self-efficacy (efficacy expectation outcome expectancy, and outcome value task) for being able to cope after the earthquakes; resilience was measured using a 14-item resilience scale developed by Wagnild (2009) that measures five characteristics of resilience (self-reliance, meaning, equanimity, perseverance, and existential aloneness); mood states were measured by the POMS 65-item adjective list; social support was measured by the The Social Support Questionnaire (SSQSR); and 16 open-ended questions were also administered asking

questions like: who cared for you/helped you? Were you worried about other people? What were you doing after the earthquake? What are your plans for the future?

The researchers noted differences between the two samples that may have greatly contributed to the results: the Hurricane Katrina sample was considerably older than the Peruvian sample. The authors suggest that elders in the U.S., generally, have the perception that they are cared for by others, especially by the government. Additionally, the elderly may not feel as much pressure and anxiety riding regarding rebuilding their lives as the Peruvians sample do, whose mean age was 43 (Karlin et al., 2012).

Elders in the U.S. are often entitled to certain types of assistants and benefits. In contrast, the Peruvian people have very few rights and resources, and therefore "undoubtedly question their possibilities, privileges, and rights associated with the estranged concepts of resilience and recovery (Karlin et al., 2012)." There had been previous disasters in Vina Vieja, and the villagers did not receive help in that case either. In contrast, New Orleans had been hit before and received much social support and services (Karlin et al., 2012).

The differences between the two samples may have significant implications for providing survivors with what they need to progress healthfully: the hope and resources to do so. While the Hurricane Katrina sample had prior experience with receiving assistance in post-ND, and had trust that the government would assist, the Peruvian sample had neither: they learned from experience that if a ND occurred, there would be no resources provided for recovery. The fact, therefore, that the sample showed significantly lower levels of LOC and self-efficacy, and negative affect, is not surprising. Perhaps this indicates that it is essential to provide survivors not only with the literal materials or money necessary to rebuild, but to have them know that assistance and guidance will be provided.

The higher levels of stress in the Peruvian sample as compared to Hurricane Katrina, the authorized theories, could additionally be attributed to the idea that the elderly are not faced as much with the challenge of rebuilding what was lost as they are more removed from active society at this stage in life. In contrast, those who are younger are indeed faced with this challenge, which can invoke anxiety in its own right, especially when there are not resources to do so (Karlin et al., 2012). Therefore, the Peruvian sample may not have had lower levels of LOC and self-efficacy, and negative affect, simply because they are from a poor area: rather in this context, where money is integral in rebuilding not just physical buildings, but schooling systems and economic infrastructure, lack of resources naturally can result in feeling "out of control" and helpless. Additionally, if there are limited resources to rebuild post-ND, there are probably limited resources to prepare for, and perhaps lessen the impact of, the ND.

Similarly, Weber et al., (2019) found that preparedness in terms of resources and knowledge may contribute to resilience post-ND: Weber et al., (2019)'s results demonstrated that meaning in life predicted resilience in survivors of tornadoes, and resilience predicted disaster-preparedness and vice-versa; these relationships still stood after controlling for the different severities of different tornadoes.

The participants were two samples from the same university in a tornado-prone area: one sample was undergraduate and graduate students, and the other was faculty members and administration.

The Impact of Events Scale was used to measure the participant's view of the severity of the tornado; The Purpose of Life Test was used to measure the participant's ability to perceive life as meaningful; and The Brief Resilience Scale was used to measure Resilience. The same procedure was used for both samples, except for with faculty and administration The Impact of Events

Scale was not used, and The Purpose of Life Test was replaced with The Meaning In Life Questionnaire.

Weber et al., (2019) notes that it is no surprise that resilience predicted disaster-preparedness (behaviors taken to be prepared for the disaster): this is not necessarily because these precautions lessened the blow of the storm, but rather, it implies that those who took precaution believed that they could have an impact on the situation and control it to some extent (Weber et al., 2019). For example, participants that were found with high levels of resilience were those that completed the first aid and CPR courses beforehand. Again, the authors note that this may not be due to the fact that the severity of the storm was lessened for them, but rather:

> The role of psychological resilience as a predictor of disaster preparedness behavior suggests that individuals who perceive themselves as adapting to stressors tend to take steps to adapt to living in a tornado-prone region; they are more likely to engage in behaviors that would mitigate the effects of a future tornado, thereby enhancing the likelihood of experiencing a return to typical functioning (Weber et al., 2019).

Additionally, notes Weber et al., (2019) the relationship can go both ways: those that engaged in disaster-preparedness activities may have higher levels of resilience because of the confidence gained from the knowledge of what to do during an emergency.

Similarly, Trip et al., (2018) noted that being prepared with the knowledge of what to do and how to act before, during and after an ND may be a factor promoting resilience in ND: researchers found that nursing students who experienced earthquakes in New Zealand in 2010 and 2011, while majority had higher levels of stress and reporting disorders not present beforehand, majority of nurses had no self-reported negative adjustment post-disaster. Factors that enabled this outcome was resilience and community-connectedness (Trip et al., 2018).

Another significant factor regarding the results was students' education as nurses: generally in health care settings, these students are taught to help themselves and others prepare for situations that are sudden and frightful, under duress (Trip et al., 2018). The researchers suggest that the students training as nurses may contribute to their high resilience levels.

The study utilized three different groups of nurses currently in nursing school. Participants completed an online survey that included: Depression, Anxiety and Stress Scale, PTSD Checklist, Work and Social Adjustment Scale, and the Connor-Davidson Resilience Scale.

The findings of Leila, Cox & Fletcher (2017), Weber et al., (2019) and Trip et al., (2018) may greatly interrelate to shed light on factors helpful, or crucial, to both trauma prevention and treatment and resilience promotion: Weber et al., (2019) found that resilience predicted actions taken to lessen the potential damage of the ND, and, taking actions to lessen the potential damage increased resilience. Similarly, in Trip et al., (2018)'s study, the sample of nurses had the *knowledge* of what actions to take. And in contrast to both studies, Leila et al., (2017) found that the Peruvian sample noted that while they wanted to take precautions and actions before and after the ND, they had no guidance as to how to do so: there was no knowledge or guidance provided pre- or post-ND that could enable the sample to help themselves.

This may demonstrate that resources important for ND recovery refer to both monetary resources *as well as* resources of guidance and knowledge, information about the right actions to take. Weber et al., (2019) found that highly correlated with resilience were those that completed the CPR and first aid courses; though the explanation goes both ways, this group's resilience levels may have increased because of the courses as a result of having the *knowledge* of how to help, to have a plan. Therefore, it should be recognized that crucial in preparing areas for an ND

requires not only the promise of monetary resources, but the assurance that there will be guidance and education regarding how to prevent and as well as how to proceed (post-ND).

This may align with Felix et al., (2020)'s findings, that when the authors helped parents arrange a daily plan for their children, the children's' out-of-character behavior returned to more baseline levels. The reason mentioned by the author for this immediate lessening of symptoms was that creating a plan heading forward in a time of chaos helps the chaos to feel more controlled (Felix et al., 2020). While it may not be the case that creating the daily plan made any of the tangible difficulties of the situation any easier, the results may be due to the fact that both children and parents had the knowledge of how to proceed and how to create structure.

When people have a plan of how to act and proceed before, during, and after a disaster, this may give them a great level of LOC and self-efficacy; knowledge and resources for actions pre, during and post ND were things the Peruvian sample did not have. This emphasis of preparedness, in terms of resources, knowledge of actions to and resources to reach out to, pre, during, and post-ND is a factor that should be greatly implemented in communities that are disaster prone in terms of potential resilience training and general education.

Additionally, the importance of having a plan moving forward amongst chaos in many realms of life is a factor that may be extremely important in treatment post-ND. Another important factor to consider in treatment is understanding the needs of the variety of age groups involved, and treating them with the understanding of their emotional needs. Indeed, Dr. Bruce Perry notes that one of the greatest flaws in traumatology is that: "it classifies people [and subsequently their treatment] based on the kind of trauma they have experienced- but they don't recognize that the *timing* of the trauma in the person's life is at least as important (Perry, 2006)."

Different ages have different emotional needs and ND hits at different points of development for every individual, as noted by Leila et al., (2017).

Although the fact that many people ND and their effects simultaneously has its consequences, it can have its benefits. Natural disasters are unique because many peoples' goals are similar in the aftermath; this is a threat that can create a sense of "common fate" (Ntontis et al., 2016). This shared sense of desiring return to "normal," control of chaos, basic needs for families, etc. can be utilized to bring people together.

Conclusion

Each trauma inherently contains different dynamics: experiencing a terrorist attack is different than experiencing sudden loss of a loved one, which is different than getting into a car accident. Although there are general protective factors that are found to promote resilience, such as healthy family dynamics, strong social bonds, stable economic status, education, etc., having these known resilience-promoting factors present does not guarantee resilience in any of these situations.

While that could be due to the fact that naturally, no one or even group of factors may necessarily guarantee resilience given that each person is different, it may be due to the fact that every situation is different, and thus requires different resilience factors from a different PTE. For example, while having a strong social network and confidants to confide in and speak to has been discussed as a factor that can promote resilience, many sexual assault victims have social networks but out of the shame of the event, do not turn to them (Padmanabhanunni & Edwards, 2015) and so that particular resilience-factor may not be as applicable in this PTE; while flexible cognitions and strong social support networks and relationships have been correlated as resilience-promoting factors, when pre-deployment soldiers were trained in strengthening and

improving these factors, results showed that these trainings were not effective. Rather, when the resilience training included building self-reflection abilities and developing personal coping skills, these training were effective as resilience promoting factors (Crane et al., 2018), indicating that these skills are particularly helpful for those in the military.

This may illustrate that it is not necessarily impactful to have resilience-promoting, or protective factors: rather, based on the PTE, certain resilience-promoting factors work well to combat the specific difficulties presented in the aftermath, or during this PTE. Indeed, Masten (2009) defines resilience as what occurs when protective factors act to protect the individual from the potential risk factors associated with the situation, and to counteract those problematic factors.

This definition illustrates the idea that perhaps there is a parallelism to preventing trauma and promoting resilience: what specific risk factors the PTE produces, the necessary resilience must aim to counteract or supplement. This idea was present in the premise of Leila, Cox & Fletcher (2017)'s study, which illustrated the importance of resilience supplementing or replacing what the trauma removed: because adolescents are more connected to "place" than adults, they hypothesized that providing another place to be connected to would promote resilience in this sample.

This idea is also a significant theme and idea in Perry's book (2006), where he repeatedly states that varying traumas have different impacts on the brain: touch-deprivation can affect a person's balance, awkwardness, and pleasure involved from touch; direct or vicarious abuse can have long term effects on a child's hypervigilance, etc. His therapies in the book directly correspond to the effects of the given trauma and provide the child repeatedly with what they

were deprived of, touch, verbal communication, sense of stability and safety, etc. in order to heal them.

When we can understand how each trauma is structurally different from another, how its differences consequently produce different effects on an individual and community: then, we can begin to understand which resilience factors may specifically support a healthy trajectory post-PTE; we can not just produce more effective, direct treatments post-facto, but understand which populations and individuals are vulnerable to a given PTE and strengthen them corresponding resilience factors; we can aim for prevention, not just treatment, of trauma. More importantly, we can understand that resilience need not be something that a person has or does not have: rather, resilience can be modeled, taught, and trained for at any and many points in a person's life trajectory.

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