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Coping strategies and methods of managing psychological trauma during adolescence: an interpretative phenomenological perspective

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Abstract

Using interpretative phenomenological analysis (IPA) the present study investigated the coping strategies that adolescents use in the aftermath of psychologically traumatizing experiences. A detailed analysis of ten transcripts identified four significant themes that specifically applied to the investigation topic: Event appraisals and coping, Emotion-regulation strategies, Extreme methods of coping, and Social support. These are discussed in reference to the present literature on coping with trauma, with a focus on concepts specifically related to adolescents. Sense of self and basic assumptions regarding their world and role within it were found to be significant underlying factors in the adolescents' experience of coping with psychological trauma. Implications for treatment and future research are also discussed.

Introduction

Very few individuals are immune from experiencing a traumatic event; research shows that 70-90% of people will experience psychological trauma at some point in their lives; with 43% of youths being exposed to potentially traumatising events (Eckes and Radunovich, 2007). Due to the variability of what constitutes a traumatic event, it is difficult to define the concept of psychological trauma. However, Robinson, Smith & Segal, (2013) argue that any situation which leaves the individual feeling overwhelmed and alone can be traumatic. There is very little literature that specifically looks at the adolescent trauma experience as opposed to adult or childhood trauma. (Cook, Spinazzola, Ford, Lanktree, Balustein, Cloitre, deRosa, Hubbard, Kagan, Liautaud, Mallah, Olafson, & van der Kolk, 2005). However, adolescents and young people are often direct victims of traumatic events or witness such events occurring to others (Cohen, Mannarino, Zhitova, and Capone, 2003). Therefore, there is a need to check our understanding of coping with trauma in relation to the adolescent population. Most youngsters are fairly resilient to traumatic experiences but as many as 25% of young people show Post-Traumatic Stress Disorder (PTSD) symptoms after exposure to a potentially traumatic event (Cohen, Mannarino, and Iyengar, 2011). PTSD is an anxiety disorder that arises when anxiety-related symptoms are maintained for months after a traumatic event (Chowdhury and Pancha, 2011). For these individuals, the consequences of psychological trauma can be more long-term and extremely debilitating. Thus, there is a need for greater insights into the experience of coping with psychological trauma so that we can help traumatised adolescents better adjust in the aftermath of such events.

A great deal of self-development occurs during adolescence, which shapes the individual's identity and can have a lasting impact into adulthood (Kroger, 2007). Self-esteem, self-image, goals and motivations, behavioural scripts and schemas, as well as information on material possessions and social relationships all make up the self-concept (McAdams, 1996). As a child becomes an adolescent their thinking becomes more abstract, which enables them to integrate separate experiences and traits into their self-concept. Despite variation in experiences and traits, identity involves a subjective feeling of continuity and being the same individual over time (Kroger, 2007). It is this integration of separate experiences whilst maintaining a coherent sense of self over time that could be of some concern within the concept of psychological trauma.

We understand the world and our role within it through two types of meaning; Global and Situational meaning (Park and Folkman, 1997a). Global meaning involves our beliefs about the world; how benevolent it is, that the world is predictable, controllable and just, as well as evaluations of our self-worth and our sense of agency. Situational meaning refers to beliefs that form through an interaction of Global beliefs and the circumstances of a particular person-environment transaction (Park and Folkman, 1997a). These beliefs influence our sense of self and understanding of the past and present, as well as expectations for the future. In the present study, such transactions are focussed on traumatic events. Traumatic events can alter the meaning that we give to our lives through the disruption of the above assumptions (Janoff-Bulman, 1992). Therefore, psychological trauma can have a lasting impact on the way that one perceives themselves and the world around them.

There are numerous reactions that can result from exposure to traumatic events. Specific effects include intrusive thoughts, sleep disturbances, irritability, withdrawal, avoidance, dissociation, hyper-arousal, and anger (Sherin and Nemeroff, 2011). Cognitive distortions may also occur, which can lead to negative emotional states and behaviours, including

depression, anxiety, PTSD, and self-destructive or aggressive acts (Cohen, Mannarino, Berliner, and Deblinger, 2000). Cognitive effects may be particularly damaging to adolescents as these individuals are in a stage of great mental development. Thus, any cognitive effects have the potential to have a lasting impact on their ability to process complex and abstract ideas (Anderson, 2005). Traumatized individuals may also have difficulties regulating their emotions, experiencing heightened emotional arousal including anxiety. These effects generally provoke only minimal functional impairment over time (Sherin and Nemeroff, 2011) and resolve as the individual integrates the experiences into their self-concept and world views. Nevertheless, there are a substantial number of individuals that go on to develop more long-term post-trauma symptoms and are diagnosed with PTSD. Studies that focus solely on trauma exposure and PTSD in adolescent samples are somewhat lacking in the literature (Landolt, Schnyder, Maier, Schoenbuecher, and Mohler-Kuo, 2013). However, those that are present do show a link between traumatic experiences and PTSD in the adolescent population. For example, Fletcher (1996) conducted a meta-analysis of rates of PTSD in trauma-exposed children and adolescents and found that 36% were diagnosed with the disorder. Therefore, some individuals develop PTSD whilst others adjust relatively well in the aftermath of a traumatic experience. Understanding how adolescents cope following a traumatic event may give us more insight into these differing consequences.

It is not all doom and gloom though; there are various coping strategies that trauma-exposed adolescents may utilise. Coping can be defined as any thoughts and behaviours used in the management of internal and external demands of stressfully appraised situations (Folkman and Moskowitz, 2004). Coping behaviours can be categorised as adaptive or maladaptive in the management of a stressor. Adaptive coping responses may reduce stressful experiences to only momentary disruptions whilst other, more maladaptive strategies may exacerbate symptoms and lead to long-term maintenance of the associated stress (Compas, Orosan, and Grant, 1993). Coping behaviours can also be referred to in terms of their functions. For example such strategies are often categorised as problem-focused vs. emotion-focused coping, and approach vs. avoidant coping styles. Problem-focused coping strategies encompass responses aimed at reducing or eliminating the source of the stress e.g.: problem-solving attempts and seeking advice and help. Emotion-focused coping strategies are aimed at reducing negative psychological and emotional states to make one feel better, and include emotional expression as well as emotional avoidance (Carlo, Mestre, McGinley, Samper, Tur, and Sandman, 2012). Approach and avoidant behaviours involve problem-focused and emotion-focused strategies that orient either toward or away from dealing with the threat (Roth and Cohen, 1986). Multiple categories may describe one particular coping strategy. For example, support seeking can be deemed as a problem-focused, emotion-focused, and approach strategy as the individual directs efforts towards dealing with the threat through the emotional and informational support of others.

Approach strategies such as problem-focused ones that involve finding out information or some sort of solution, and emotion-focused ones such as optimism and positive reappraisal are generally adaptive (Hager and Runtz, 2012). Hager and Runtz (2012) describes how the benefits of emotion-focused coping work through managing internal experiences, which may help the individual feel less overwhelmed in such a stressful situation. Smyth (1998) looked into the effects of one form of emotion-coping; written emotional expression, and suggested that this has a positive effect because it facilitates cognitive processing of the traumatic event and subsequent understanding. Seeking social support has also been shown to have protective properties against the negative effects of

stress (Corbin, Farmer, and Nolen-Hoekesma, 2013). This can be deemed as an approach strategy, which encompasses problem-focused and emotion-focused coping as the individual is actively seeking out advice or an emotional outlet. The vast majority of the literature indicates that approach strategies are more beneficial than avoidance ones. However, avoidant strategies such as denial, withdrawal, and dissociation may be initially beneficial in situations where the trauma is overwhelming and uncontrollable. Such strategies temporarily relieve any associated distress, shame, or helplessness (Briere, 2002). For approach strategies, there is an underlying concept of making attempts to alleviate the stress associated with the traumatic event, whether emotionally, cognitively, or both. Such strategies are classed as adaptive because of their long-term beneficial, adjustment effects (Hager and Runtz, 2012).

Avoidant coping styles may offer some initial benefit in uncontrollable or high risk situations, but they are generally thought of as maladaptive strategies. For example, engaging in high levels of avoidant and ruminative coping is a consistent predictor of post-trauma distress (Littleton, Axsom, Grills-Taquechel, 2011). Wagner, Myers, and McIninch (1999) argue that substance abuse is a cognitive and behavioural coping strategy that adolescents may use to manage stressful life events. Within this, anger and avoidance have been independently implicated in alcohol and marijuana use (Eftekhari, Turner and Larimer, 2004). Traumatized youths are vulnerable to engaging in aggressive behaviours in the aftermath of stress, as such behaviour has emotion-regulation qualities. Anger and aggression produces physiological arousal, which can alleviate adverse emotions through being an emotional outlet (Ivanov, Yehuda, Greenblatt, Davidow, Makotkine, Alfi, and Newcorn, 2011). Self-harm is another maladaptive emotion-regulation strategy that may be used to manage stress. In Mikolajczak, Petrides, and Hurry's (2009) study, 80% of young people that deliberately harmed themselves reported an attempt to regulate unpleasant emotions as a motivating factor. Therefore, this too is implicated as a maladaptive emotion-regulation strategy. Emotion-regulation strategies may be deemed as adaptive because they involve attempts to make one-self feel better. However, these are not adaptive as they do not attempt to process the source of such psychological distress. Therefore, they will not result in healthy long-term adjustment following stressful and traumatic events. It is important to understand what needs are being met by such behaviours so that we can help young individuals turn to more adaptive methods of coping.

A variety of treatment strategies and interventions are available for traumatized individuals. For example, PTSD treatment includes psycho-education, exposure work, and restructuring of any dysfunctional cognitions arising from the traumatic experience (Perrin, Smith, Yule, 2000). These can all be delivered separately through various interventions but Trauma Focused-Cognitive Behavioural Therapy (TF-CBT) is an intervention that entails all of these. Studies have consistently shown that children and adolescents with PTSD benefit from TF-CBT (Cohen et al, 2003). Silverman, Ortiz, Viswesvaran, Burns, Kolko, Putnam, & Amaya-Jackson (2008) conducted a lengthy meta-analysis of trauma interventions for children and adolescents and concluded that cognitive-behavioural therapies were more effective at resolving psychological distress. Marks, Lovell, and Noshirvani (1998) also support cognitive elements of trauma treatment and therapy. They argue that cognitive restructuring, along with exposure therapy, have the best treatment outcomes. Therefore, a primary focus on cognitions, and their influence on behaviour, may be central to the post-trauma adjustment of adolescents. If this is the case, one would expect to see cognitions and thought processes as central factors in the present study's participant's descriptions of coping with trauma.

However, not all individuals that are exposed to potentially traumatic events experience PTSD symptoms and need treatment (Mancini and Bonanno, 2006). Many people endure horrific events without experiencing significant disruptions in functioning. This was once thought of as pathological but the concept of resilience now defines this as an adaptive way of coping with traumatic events (Mancini and Bonanno, 2006). Such individuals are able to lead more successful lives than expected despite being at greater risk for serious problems (Brooks, 2006). Post-traumatic growth (PTG) is a closely linked concept and has been defined as positive change experienced as a result of the struggle with trauma (Meyerson, Grant, Carter, & Kilmer, 2011). Importantly, it is not the traumatic event itself but the struggle in the aftermath that results in PTG; thus the coping strategies that one utilises to deal with stress are contributing factors in the development of PTG. Only within the past few years have studies in this area specifically focused on adolescents. In their meta-analysis of 25 studies focused on resilience and PTG in adolescents, Meyerson et al (2011) found that positive reappraisal strategies were typically associated with PTG. It is important to understand what works for resilient people, as psychological trauma appears to affect them far less negatively than those who are less resilient.

The variety of possible strategies that an adolescent could utilise in the aftermath of psychological trauma is extremely vast. Additionally, numerous factors affect what strategies these individuals choose to use. There is a great deal of research on coping strategies per se, but not so much that is specifically focussed on the trauma-exposed adolescent. Gaining insight into adolescents' experiences of post-trauma coping and how they integrate such events into their self-concept is important to ensure that treatments and interventions are indeed applicable to the trauma-exposed adolescent. The following research could add to such insight.

Methodology

Participants

Ten participants volunteered to take part in the study using an online participation pool at Plymouth University; one male and nine females participated. All participants were undergraduate psychology students and received two course credits for their participation. From here on, the ten participants will be referred to as P1, P2, P3 and so on. Eight out of the ten participants were below the age of 25 years. Two participants reported experiencing a traumatic event below the age of ten years but this was only a focus of discussion for P7, for whom it was an on-going traumatic stressor into adolescence. All other participants discussed coping with traumatic effects that occurred in adolescent years. Therefore, analysis focussed on coping strategies in the aftermath of psychological trauma during adolescence, rather than in childhood.

Data Collection

Each potential participant took part in a screening process after their initial sign-up. This involved a short phone call where details of the research topic were disclosed so that all participants were aware of their role within the study before fully committing to participate. As this was not an experimental design, there was no need for any level of deception and potential participants were free to ask any questions that they may have had. At the end of this session, potential participants were able to decide whether they wished to continue with the study or not.

The study consisted of a one-hour semi-structured interview in accordance with the Interpretative Phenomenological Analysis method. The interview looked at the traumatic event, the experience in the immediate aftermath, and the coping strategies that each participant used. These topics were covered to give a fairly in-depth understanding of the entire experience. The same semi-structured interview guidance points were used for all ten sessions. However, as the interviews were indeed semi-structured, they do not all follow in the same order due to various topics being introduced by the participant across and within interviews. Each participant was briefed at the beginning of the session and debriefed at the end, with an opportunity to ask questions at both points. Before starting the interview, each participant signed a consent form. The interviews were recorded and later transcribed. All participants were notified about confidentiality and anonymity issues, and of their access to any of the materials regarding their interview session. Data collection lasted approximately two weeks.

Analytical procedure

The analysis was conducted chronologically; each transcript was analysed in the order that they were conducted, beginning with participant one's transcript. The interview transcript was read through thoroughly, noting any relevant thoughts in the left hand margin. This was repeated several times until a complex understanding of the participant's experience of the traumatic event, the effects of the traumatic event, and attempts to cope in the aftermath of the traumatic event was established. Originally, there was also a fourth focus on the participant's journey to university, with the aim of investigating whether a resilient trait characteristic contributed to both the recovery from posttraumatic distress and the maintenance of goals and motivation to pursue Higher Education. However, the data from the interviews was too varied and weak to constitute clear and consistent themes within and across participants and was subsequently dropped as a focus of analysis. After the initial note-taking stage, the notes were reviewed and incorporated into psychological terminology that was commented on in the right hand margin of the transcripts. Great care was taken to make sure that any notes and potential themes were in line with participant's use of language and comments. This analysis was repeated for the other nine transcripts with a focus on emergent themes within, as well as across, transcripts. Diverging as well as converging patterns were noted too. Particular focus was on the effects of the traumatic experiences and the coping strategies that these individuals utilised to manage the effects.

Following this analysis of the data for emergent themes was the formation of superordinate themes and their sub-themes. This involved a complex interplay of using the literature as well as transcript extracts to formulate these themes. These themes were presented to a small group of other psychology students during three data sessions to control for bias in interpretation of the data, as well as to clarify understanding. The analysis was a lengthy and fairly time-consuming process to allow all possible measures to be taken to ensure that the views and comments of the participants are correctly represented within the themes. These themes are discussed in the analysis and discussion section below.

Justification of method

The aim of this study was to gain rich and detailed information on individual's experiences of coping with and managing psychological trauma. IPA focuses on the individual's experience of their world; the focus is on the individual's cognitive, linguistic, affective, and physical being (Pringle, Drummond, McLafferty and Hendry, 2011). It involves a thorough examination of a person's perception of events or objects in their life through double hermeneutics (Smith and Osborn, 2008), thus obtaining the level of insight required, within this study, to better our understanding of trauma survivor's experiences. The questions in

the semi-structured interview acted as prompts to cue the participant to talk about certain concepts that are of importance within this area; making sure that the content of the transcripts remained applicable to the research topic. Therefore, this research method is a very appropriate way of collecting the specific, in-depth information required to interpret individual's experiences of coping with psychological trauma.

Analysis and Discussion

Participants were asked to discuss their experiences of traumatic events during adolescence, with a specific focus on coping strategies utilised in the aftermath of such events. Four superordinate themes were identified during analysis of the ten transcripts: Event appraisals and coping, Emotion-regulation strategies, Extreme methods of coping, and Social support. Implications of these themes within the field of coping with psychological trauma are discussed in the conclusion.

Theme: event appraisals and coping

Situation appraisals are influential in the coping strategies that one chooses to utilise in the aftermath of stressful events. Self-efficacy is an important mediator within this relationship. Luszczynska, Scholz, and Schwarzer (2005) describe self-efficacy as the beliefs that one has regarding one's competence to cope with a broad range of stressful or challenging demands. These internal control beliefs and feelings of self-efficacy regarding the stressful situation influence coping behaviour (Terry, 1991). These concepts are referenced across participant's transcripts and discussed below.

Causal attributions of the situation widely varied across participants. The extracts below show that some young people attributed internal causes to the event; others attributed more external causes, whilst others still reported uncertainty regarding such attributions. P1 describes guilt over the traumatic event, implying a certain degree of internal attribution. Interestingly, they also perceive themselves as a possible risk factor for harming others.

P1, Lines 86-90: "I felt like, cos I was feeling guilty, I thought something might happen to them because if we had something in common then they'd get the wrap instead of me"

P2 is very adamant and clear that they were not to blame and thus attributes external causes for the traumatic event. This participant repeats this on several occasions within the extract, indicating some personal importance that this point is made clear.

P2, Lines 481-485: "I didn't see it as my fault. I definitely didn't, erm I don't know if I necessarily understood it fully erm but I didn't see it as something I'd done."

P3 describes uncertainty around their perceived role within what happened. Interestingly, they report feeling emotionally unstable as a result of this, which implies a link between cognitions and emotions.

P3, Lines 797-803: "I didn't really know where I stood with like I had the obvious thoughts as I said earlier of like is it my fault, could I have done anything, could I have done anything better, but emotionally I had no idea where I stood"

Causal attributions of a stressful event are important because of the role they play in coping strategy selection. Attribution theory proposes that people have a need to explain the events that occur to them, especially when anything unusual, unwanted, or unexpected

happens (Joseph, Brewin, Yule, and Williams, 1993). People explain the causes of events along three dimensions; dimension of locus of causality, stability, and controllability. In terms of locus of causality, individuals attribute causes either externally or internally to themselves (Mclean, Strongman, and Neha, 2007). These attributions can then influence the type of coping strategy that individuals employ. Amirkhan (1998) found that attributions proved essential when predicting coping behaviour or states of distress. P1 reports a level of guilt associated with the event; Joseph et al (1993) write that attribution of negative events as personally controllable can lead to feelings of guilt, which can result in emotional disorder and difficulties with coping. Those that attribute cause as external to themselves are likely to doubt the efficacy of attempts to control the situation (Terry, 1991), and therefore may choose avoidant strategies due to the belief that outcomes cannot be influenced by oneself. Amirkhan (1998) supports this with their finding that avoidant and escapist coping strategies were the result of coping failures attributed to external, stable and uncontrollable aspects of the stressful experience. Neumann (2000) has suggested that the relative ease with which an attributional process is executed has a direct impact on emotion-elicitation. P3 describes post-trauma emotional instability; in relation to Neumann's (2000) findings, this suggests that P3's lack of certainty over causal attributions regarding the traumatic event directly affected their emotional arousal. Therefore, helping adolescents understand their thoughts and appraisals regarding traumatic events may result in more stable emotional experiences in the aftermath. These studies do not solely refer to children and adolescents. However, numerous researchers, including Josephs et al (1993), report that most children and adolescents respond to disaster in similar ways to adults; they attempt to integrate and master their experience. Therefore, one can assume that the associations between causal attributions, coping styles, and emotions seen in the above studies are applicable to the present investigation of coping strategies in the aftermath of adolescent trauma. Implications of these causal attributions are discussed in relation to other themes in the conclusion.

Perceived Control and Self-efficacy over the aftermath of the event is closely linked to the concept of causal attributions. However, perceived control and self-efficacy beliefs are directly concerned with appraisals of the aftermath of the event, rather than the event itself. The extracts below relate to participant's beliefs about the level of control they had during the time following the traumatic event. Like many other participants, P6 describes feeling completely out of control during the aftermath as well as reduced self-efficacy beliefs regarding abilities to master the situation.

P6, Lines 121-122: "Completely out of control. I had no control about anything I did"

P8 elaborates on this feeling, linking the concept of external causal attributions to perceived lack of control.

P8, Lines 178-181: "this is so out of my control and it wasn't a situation that, it was nothing about me personally"

Within the coping literature, perceived control is closely linked to the concept of coping self-efficacy (CSE), which refers to the beliefs that one has regarding their ability to manage post-traumatic recovery demands (Cieslak, Benight and Lehman, 2008). Both participants report feeling completely out of control in the aftermath, which would indicate that their self-efficacy beliefs regarding mastery of the situation were fairly low. As mentioned earlier, adolescence is a time of great self-development; research suggests that it is negative cognitions about the self and world that render an individual less capable to manage trauma-related demands (Cieslak et al, 2008). Combining the literature on CSE

with Janoff-Bulman's (1992) work on shattered world assumptions, places sense of self as a central component within the concept of self-efficacy beliefs regarding coping in the aftermath of trauma. Focusing on post-trauma negative cognitions about the self and world may help increase adolescent's low self-efficacy beliefs regarding their post-trauma coping abilities. Those who have high self-efficacy beliefs have been found to use more task-oriented coping strategies, which result in better management of the consequences of traumatic events (Luszczynska, Benight, and Cieslak, 2009). Frazier, Steward, and Mortensen (2004) have also found that perceived control and sense of self-efficacy are associated with better outcomes across a variety of traumatic events, including bereavement and sexual assault. Therefore, enhancing a sense of coping self-efficacy within traumatised individuals may be of benefit for coping outcomes, and thus has implications for treatment approaches.

Theme: emotion-regulation strategies

The ability to successfully regulate one's emotions is adaptive and promotes psychological well-being, especially when dealing with anger and psychological distress (Mauss, Cook, Cheng, and Gross, 2007). Thompson (1994) defined emotion regulation as consisting of extrinsic and intrinsic processes that monitor, evaluate, and modify emotional reactions to accomplish one's goals. Difficulties with regulation of emotions during adolescence can be particularly detrimental as research shows that numerous mood regulation problems, which lead to depression, typically start at this age (Horn, Pospel, and Hautzinger, 2011). The most prevalent sub-themes relating to the concept of emotion-regulation are presented here. Not all are negative, and interestingly, many influence each other.

Anger and Acting-Out Behaviours were reported by nearly all participants to varying degrees. For example, P1 describes sudden explosions of anger as a consequence of ruminating and focussing on the traumatic event. They imply a struggle to regulate their own feelings, which manifested in aggression and fights aimed at others.

P1, Lines 918-922: "yer other times throwing outbursts and er there's a time I ended up getting in a fight because, I was, I was still thinking about it"

In addition to externalising acts of aggression, P3 describes internalising behaviours; cutting in an attempt to alleviate their psychological and emotional distress. Interestingly, P3 also comments that these were not effective coping strategies. This poses the question of why they were utilised during the aftermath.

P3, Lines 281-284: "screaming at people, hitting people, cutting myself that's not an effective way of dealing with anything"

Anger and aggression are two concepts that have been greatly researched; unfortunately research in relation to coping styles during adolescence is extremely lacking (Carlo, Mestre, McGinley, Samper, Tur, Sandman, 2012). In relation to the extract from P1, the effects of rumination on anger have been researched in a handful of studies, including that by Ray, Wilhelm, and Gross (2008). Ray et al (2008) asked participants to either ruminate on or reappraise an angry autobiographical experience, and found that those asked to ruminate reported higher levels of anger as well as greater sympathetic nervous system activation. This suggests a high level of arousal and anger as a result of rumination, and implicates rumination within emotion-regulation difficulties.

In addition to externalising acts of aggression, P3 reports internalising behaviour of self-harm. Self-harm has been defined as the deliberate, direct destruction or alteration of body tissue (Gratz, 2003). Chapman, Gratz and Brown (2006) comment on how clinical, theoretical, and empirical work indicate that self-harm is likely to be an emotion-regulation

strategy. As with the externalizing behaviours of anger and aggression, internalising behaviour and self-harm appears to form as a result of maladaptive coping skills and the inability to regulate one's emotions. In their meta-analysis, Klonsky and Muehlenkamp (2007) found that such actions bring temporary emotional relief and a drop in negative affect. This immediate reduction in negative affect and consequent sense of relief may be an explanation for initial utilisation of this strategy and its maintenance from then on. Mikolajczak, Petrides, and Hurry (2009) found that eighty per cent of their participants reported self-harming in an attempt to regulate unpleasant emotions. This makes the function of self-harm quite clear. More importantly, these authors go on to suggest that such behaviour may be an attempt to down-regulate negative feelings that are exacerbated by maladaptive coping strategies such as rumination and self-blame. Thus, there are implications for the need to focus on such cognitive processes to reduce the likelihood of extreme maladaptive strategies like aggression and self-harm. It seems that these strategies are not necessarily immediate and/or direct effects of experiencing trauma but, rather, manifest from the trauma victims inability to sufficiently cope with these overwhelming experiences.

Rumination is implicated in the above sub-theme but it was also referred to within other comments from participants. P1 describes a preoccupation with event-related thoughts, which interfered with other aspects of daily life and revolved around assessment of their role within the situation. A great deal of negative affect was associated with such thoughts.

P1, Lines 861-868: "I spent a lot, a lot of the time just constantly thinking about it, not thinking about school or my mates, it was just, what could I have done or why did it happen to him and not me? Then er, I'd get really stressed out"

P9 adds another dimension to the concept of rumination and the need for understanding; that of intrusive thoughts. They describe how these were persistent thoughts and revolved around the self in relation to what happened.

P9, Lines 95-99: "very intrusive like I was always thinking about it, always erm thinking about my relationship with her, maybe like things I'd said that I regretted"

Rumination is a common response in the aftermath of trauma and is deemed a maladaptive coping strategy (Laposa and Rector, 2012). It is thought to be driven by problematic appraisals and is influential in managing perceived threat (Ehring, Frank, and Ehlers, 2008). There is also a great amount of literature linking rumination and intrusive thoughts. Ehlers and Clark (2000) conducted a thorough study on rumination and intrusive thoughts and concluded that this particular type of rumination may maintain PTSD because change in the trauma memory is inhibited. This results in the maintenance of associated maladaptive appraisals. The concept of rumination as a maladaptive coping strategy is clearly implicated here. Both participants describe negative associations with rumination; in addition to this, they comment on attempts to understand their own role within the traumatic event. A sense of self-blame is implicated here as both participants assess if they could have changed what happened; or what they might regret. Such thoughts are forms of self-referent processing, which is associated with intrusive thoughts and rumination (Halligan, Michael, Clark, and Ehlers 2003). These adolescents are trying to understand what happened in relation to them-selves and what it now means for their world in the aftermath of the event. As mentioned above, rumination is not necessarily the most adaptive form of processing. There are numerous research studies showing that repetitive thinking is implicated in the formation and maintenance of PTSD symptoms, over and above other known predictors (Ehring, Frank, and Ehlers, 2008). This research paper

also contributes to the literature on rumination and trauma; particularly adolescent trauma. The implications for treatment and interventions are clear; early identification of those individuals with a tendency to ruminate about their traumatic experience is important to help minimise the number of trauma survivors who go on to develop PTSD symptoms.

Cognitive reappraisals were identified in the transcripts as well. Gross and John (2003) defined such appraisals as cognitively construing a potentially emotion-eliciting event in such a way as to reduce its emotional impact. These changes in cognitions can be seen in the following extracts. P4 reports gaining a certain level of understanding and comfort through a reduction in self-blame and change in perspective.

P4, Lines 83-87: "I realised it wasn't my fault, he didn't want anyone to know, he didn't want people to know he was sad so that kind of helped a bit"

P9 describes emotional expression as a method of cognitive reappraisal; specifically written emotional expression. Writing enabled this individual to alter their cognitions and dismiss any thoughts deemed unreasonable.

P9, Lines 811-816: "it was just to get it out and then to read it back where after as well and then realise how ridiculous they were or whatever"

Cognitions are of great significance in emotion-regulation. Researchers postulate that cognitive processes enable us to manage or regulate our emotions and stay in control of them, especially after experiencing threat or stressful situations (Garnefski, Kraaij, and Spinhoven, 2001). As discussed above, preoccupation with trauma-related thoughts can result in rumination; cognitive reappraisal is a method of altering these typically negative cognitions resulting in a reduction of any associated psychological distress. Situation appraisals have long been implicated in the development of PTSD symptoms. For example, Ehlers, Mayou, and Bryant (2003) and Stallard and Smith (2007) found that various negative appraisal measures and coping styles predicted PTSD symptomatology in 5-18 year olds. As well as being implicated in the above concept of rumination, the negative appraisal of self-blame is suggested within post-trauma cognitive appraisals. The appraisal of self-blame is strongly related to depression and anxiety in adolescents and adults (Garnefski, Legerstee, Kraaij, Kommer, and Teerds, 2002). More importantly, these researchers concluded that this relationship was more pronounced for adolescents than adults. Reappraisal of negative beliefs are associated with reduced negative emotions and more positive affect (Gross and John, 2003), as seen in the extract from P4. A specific method of reappraisal is expressive writing, which P9 refers to. This promotes successful coping by triggering replacement of more maladaptive strategies with a more focussed method that increases perceived control over one's emotions (Wenzlaff and Wegner, 2000). It is evident that cognitive processes can influence post-traumatic coping through adaptive and more maladaptive methods. Therefore, a focus on cognitions and altering negative appraisals may aid coping in the aftermath of psychological trauma. This is the concept behind cognitive restructuring as a treatment strategy.

Theme: extreme methods of coping

Through their descriptions of coping in the aftermath of psychological trauma during adolescence, it became clear that three participants were displaying characteristics of different extreme forms of coping: substance abuse, anorexia, and resilient traits. These concepts are discussed below.

Substance abuse was utilised as a coping strategy by P2 as an attempt to avoid the aftermath of the traumatic experience, which resulted from a desire to reduce post-trauma negative emotions.

P2, Lines 224-227: "I think it buffered me. I think it blocked me from the sort of what was going on at home"

P2, Lines 246-249: "I think I was just literally living sort of day to day and that's what made me feel better so that's what I did ['get wrecked']"

Substance abuse as a coping strategy is not uncommon and it has been suggested that it functions in response to increased negative affect following a stressor rather than exposure to the stressor itself (Kilpatrick, Acierno, Saunders, Resnick, Best, and Schnurr, 2000). Coping with stress has been identified as a motive for alcohol use in trauma-exposed adolescents (Dixon, Leen-Feldner, Ham, Feldner, and Lewis (2009). The use of other substances as a coping strategy has long been implicated within the literature too. For instance, Carman (1979) studied frequent intoxication of marijuana, amphetamines, hallucinogens, or barbiturates and identified reduction of distress as a motivating factor for such substance abuse. Therefore, emotion-regulation is a key motive for substance abuse. Avoidance is also associated with this form of coping. For example, many individuals have reported an interaction between avoidant coping and expectancy that alcohol use would have a positive outcome in the management of stressors (Cooper, Russell, Skinner, and Windle, 1992). A prominent theory as to why individuals turn to substance abuse in response to stress is the 'self-medication' hypothesis. Stewart, Zeitlin, and Samoluk (1996) describe the hypothesis in terms of stress and coping in young people; stating that youth exposed to a traumatic event may use alcohol to aid coping and increase positive affect. However, there is the risk of addiction and longer-term mental and physical health problems for anyone that abuses alcohol and drugs (Kilpatrick et al, 2000). Aiding emotion-regulation abilities in those that have experienced stressful life events is important in minimising the motivation to turn to this maladaptive option of emotion-regulation. As discussed in other themes, cognitive processing, emotional expression, and social support are significant in helping adolescents cope with traumatic events.

Anorexia was reported by P3 and can be viewed as another extreme form of emotion-regulation (Harrison, Sullivan, Tchanturia, and Treasure, 2010). Restriction of eating habits increased a sense of perceived control in an otherwise uncontrollable situation, which resulted in an increase in positive affect.

P3, Lines 667-672: "that pretty much led to me being hospitalised with anorexia, all the stuff with my brother erm I guess as a way of getting back control of the situation erm all of that lot"

P3, Lines 716-725: "that's [eating] the first thing you're going to control because it gave you a bit of like, I guess in a kind of messed up way, made the situation feel better that I had a bit of control about something and be as angry as I want and I could do something about it and see a difference"

Anorexia is also implicated as an emotion-regulation strategy; increased positive affect/decreased negative affect resulted. Eating disorders as a function of emotion-regulation is a growing area of research but there are some studies that have linked the two concepts. For example, Heatherton and Baumeister (1991) suggested that extreme food restriction and binge-eating act as a form of escapism from negative self-perceptions and emotional distress. Ricca, Castellini, Fioravanti, Sauro, Rotella, Ravaldi, Lazzaretti, and Faravelli (2012) support this by arguing that restricted food consumption regulates intense or hard to distinguish emotions, it restricts general affective experience, or directs attention away from negative emotions. The authors elaborate on this as a method of regaining control in a situation where emotional states are unable to be effectively managed. Through focussing on eating behaviours, rather than the stressor itself, a sense of control is achieved (Ricca et al, 2012). P3 explicitly states that such behaviour gave them a sense of

control in a situation deemed uncontrollable. Therefore, anorexia is implicated as a coping method in the aftermath of stressful experiences; particularly when there is a perceived lack of control over the situation. There is a need to help those that turn to such methods of coping in the aftermath of trauma establish other, more adaptive, ways of regaining a sense of control over their experiences.

Resilience and problem-focused coping are identified in extracts from P10 as they describe a sense of independence as well as self-efficacy in their abilities to take care of themselves. This is driven by the need to re-establish what they had lost, with the aim of moving forward in their life.

P10, Lines 353-361: "I felt I couldn't proceed with the rest of my life, which is marriage, family without being able to offer what I didn't have so that became, it was all, it became a sort of 'it stops here' attitude so I'm not going to repeat the mistakes of my family going forward"

P10, Lines 510-515: "you feel very, very vulnerable. You think well it's up to me or, or you know and, or no-one, no-one else is going to take care of me; especially with no extended family or siblings"

Rather than attempting to avoid the situation and seek comfort in external sources of relief, P10 reports a drive for mastery and displays resilient characteristics. Cognitive hardiness is a central component of resilience. This term was originally coined by Kobasa (1979) who described the three factors that make up this concept; the belief that one can control or influence an event, commitment to one's activities, interpersonal relationships and the self, and viewing change as a challenge rather than a threat. All of the above concepts contribute to the production of problem-focused coping strategies rather than avoidant or emotion-focused ones. For example, Dumont and Provost (1999) found that resilient adolescents scored higher on problem-solving strategies than vulnerable adolescents did. Problem-focused coping strategies generally lead to better outcomes in the aftermath of stressful life events (Beasley, Thompson, and Davidson, 2003). Therefore, identifying the variables that help promote resilience in adolescents is extremely worthwhile to help those affected by traumatic events manage the aftermath in more adaptive and problem-focused ways with the aim of reducing post-traumatic distress. This is beyond the scope of this research paper but there are studies that have looked at the concept of resilience and negative life events. What this study does show is that numerous variables can arise from asking adolescents to explicitly discuss their traumatic experiences; this method may also be of benefit in understanding the exact characteristics that constitute a resilient individual.

These three participants give a small insight into the different, extreme reactions and responses that experiencing a traumatic event can induce. As Lazarus and Folkman (1984) put it, coping styles can affect how a stressful event is perceived and how it is managed. P2 and P3 display avoidant strategies either through the utilisation of substance abuse to evade negative emotions or by focussing on eating habits, rather than the situation itself. P10, on the other hand, utilised problem-focussed strategies showing motivation to try and deal with the aftermath of the traumatic event rather than avoid it. Understanding what influences coping strategy selection in adolescence is important to help reduce the utilisation of maladaptive strategies and promote adaptive strategy use instead.

Theme: social support

Definitions of social support vary but it can generally be described as the perceived or received assistance provided by other individuals, which is typically categorised into emotional and informational dimensions (Tandon, Dariotis, Tucker, and Sonenstein, 2013).

In reference to adolescents, support from others has predicted levels of self-esteem, depressive symptoms, and school outcomes (Chapman, 2003). Numerous aspects of social support were reported within participant's responses but two sub-themes deemed to be relatively new concepts within this field are discussed below.

Need for guidance and direction on how to cope was frequently referenced across transcripts. For these adolescents, turning to others for advice or different perspectives on how to cope with the aftermath of their traumatic experience was a coping strategy in itself. P1 made attempts to view the situation from another's perspective with the aim of copying what they would do in such a situation.

P1, Lines 327-330: "what he would have said or what he would have tried to do and then I try and apply that to what I could do"

P8 also comments that others were influential in their choice of coping strategy. Without such advice from others, there is the implication that P8 would have been unable, or would have struggled, to think of such strategy ideas themselves.

P8, Lines 734-740: "she was useful for that because she'd be like you know, oh well have you thought about this or erm maybe you could do this to make yourself feel better or think about it in this way"

There is little literature that looks specifically at the trauma victim's need for guidance on coping per se; rather studies focus on the various roles of social support within the overall concept of coping with a traumatic or stressful event. Within this vast area of study, Vaux (1990) posited that social support is actually a meta-construct made up of various dimensions, including a network of resources through which an individual receives help in dealing with demands and achieving goals. Schaefer and Moos (1998) elaborate on this, arguing that others offer help through influencing coping behaviour and promoting successful adaptation to negative life events. This concept is clearly portrayed in the above extracts, where participants perceived others as a source of advice and help on how to cope in the aftermath of their traumatic experiences. Interestingly, others do not have to explicitly offer help; simply taking their viewpoint can aid one's own coping skills. This may work through the process of integrating other's perspectives into schema change, which is what Tedeschi and Calhoun (2004) propose as one function of supportive others in post-traumatic growth. Other explanations of social support as a source of guidance are extremely lacking within the literature. However, as DeLongis and Holtzman (2005) write, much of coping with stress may be undertaken with a close other, even if the stressful situation originates outside of the close relationship. Therefore, to fully understand how negative life events and stressful situations are coped with, we must gain better insight into how stress is managed within these relationships. This means, fully understanding all the concepts that constitute social support. Social support as a source of guidance and direction is clearly identified within the responses from participants of the current study. Understanding the perceived benefits of receiving such guidance through support may have implications for treatments and interventions and thus is a pressing area for future research.

Reassurance through feeling understood is represented through two different, but closely connected concepts. Firstly, there is the aspect of feeling understood through shared experience and confiding in those that can relate. P7 describes comfort in having support from someone who could completely relate to their own experiences and emotions regarding the traumatic event.

P7, Lines 1225-1234: "having someone who's gone, can relate to what you've gone through and say 'oh yer I had that as well, this is what I did about it' and stuff it's, it's kind of nice to have that because someone who just listens to you, that's all fine but they don't know how you're feeling whereas my Mum did"

Feeling understood through speaking to others that knew the participant well was also reported. For example, P6 describes a perceived communication issue when talking with individuals that they had little or no relationship with; they preferred to confide in someone who they had a close relationship with instead.

P6, Lines 1095-1102: "I didn't really feel like when you vent someone who doesn't really know anything about you, you're just sort of saying names of people and stuff that they don't know so, it's just good to talk to somebody who knows about you"

Research on this area of social support is also lacking. However, the role of empathy within social support, which has only recently begun to receive empirical evidence (Ferguson, Carlson, Zivnuska, and Whitten, 2010), can be used to make inferences about reassurance through feeling understood. Ferguson et al (2010) argue that others are empathetic through validating the distressed individual's feelings and assuring them that the stress associated with the situation is understood. The concept of feeling understood could be describing the perception that others are being empathetic; and that those that can relate can better empathise. The above authors go on to highlight the role of social connections within empathy, stating that through feeling understood, empathy allows individuals to feel connected within the situation. This could be an explanation for the increase in positive affect perceived by P7 as a result of feeling understood. These are preliminary assumptions; an extensive literature review has identified that research on the experience of receiving empathy from others is fairly absent. However, participants in this study report that received empathy is beneficial; through the perception of feeling understood. Therefore, the role of received empathy within the concept of coping with adolescent trauma is a relevant area of future research.

Confiding in individuals that the participant had a close relationship with was also associated with feeling understood. Tausig and Michello (1988) looked at social-support seeking behaviour and identified a general order of contact with family and friends as the first help-seeking choice; one can assume that these individuals would have a close relationship with the help-seeker. Close others that are perceived as responsive and understanding reduce the negative impact of a stressor on one's health and subjective well-being (Sarason, Sarason, and Gurung, 1997). The above evidence leans towards a concept of a preference for social support from those that know the support-seeker well and can relate to the distressing experience through making the trauma victim feel understood. Research on this specific dynamic of social support is lacking, which makes it hard to fully interpret this particular experience for adolescents coping in the aftermath of trauma. What is significant, however, is how research and the discovery of relatively new dimensions of pre-existing concepts can offer a more nuanced understanding of the role of social support and coping with psychological trauma during adolescence.

Conclusions

For these adolescents, coping in the aftermath of psychological trauma was a challenging experience. Many of these individuals differed in their situational appraisals, with some internally attributing the event and others perceiving external sources to be the cause. All

individuals experienced a great sense of loss of control in the aftermath, with low self-efficacy beliefs regarding their ability to cope. It is generally accepted that appraisals and perceptions of control influence coping strategy selection (Terry, 1991), and it is here that the participant's responses varied again. Adaptive strategies such as cognitive reappraisal and restructuring, social-support seeking, and resilient characteristics were reported as well as generally maladaptive strategies of substance abuse, anorexia, and rumination. Interestingly, participants did not report solely adaptive or solely maladaptive coping strategies; for some, the maladaptive strategy of rumination preceded more adaptive methods. There are a few important points to note within these findings. First is the prevalence of cognitive strategies. Cognitive processing is present in causal attributions, reappraisals, rumination, resilience, perceived control, and self-efficacy beliefs. These constructs are all evidenced in participant's transcripts. Second, is the identification of two seemingly under-researched concepts within the field of social support; a need for guidance and direction on how to cope, and gaining a sense of reassurance through feeling understood by others. These findings can be interpreted in terms of basic world assumptions and sense of self.

Social cognitive theories emphasize the effect of trauma on the victim's basic beliefs about themselves and the world (Bower and Sivers, 1998). As mentioned earlier, traumatic events can disrupt an individual's sense of self and world views (Janoff-Bulman, 1992). Basic assumptions that the world is benevolent, the world is meaningful, and the self is worthy provide individuals with a cognitive framework in which to assimilate incoming information (Lilly, 2011). Traumatic events can challenge these assumptions and lead to distress symptoms. Distress occurs through incongruence with previously stored schemas and information. The traumatised individual deals with such distress through distorting, suppressing, or denying the incongruent information so as to maintain one's prior beliefs, or by altering their core beliefs to accommodate the new information into their existing schema (Bowers and Sivers, 1998).

The above forms of cognitive processing are involved in the integration of distressing events into these changing world assumptions. Attributions and appraisals are affected by world assumptions, and these in turn influence coping strategy choice (Jeavons and Greenwood, 2007). More maladaptive and avoidant strategies may be initially utilised in the face of overwhelming emotions. Bowers and Sivers (1998) argue that one cannot successfully narrate an event until it is integrated into schematic meaning networks and has lost its emotional impact. Only once this has occurred, can the individual reinterpret the events to maintain their core beliefs. The maladaptive strategies evidenced by adolescents in the present study may represent such a struggle to integrate the overwhelming events into pre-existing beliefs and schema. Nearly all participants described a sense of lack of control, which could be indicative of such shattered, or disrupted, world assumptions. Therefore, traumatized adolescents are vulnerable to experiencing disrupted core beliefs regarding their world and role within it. As a great deal of self-development occurs during this age group, it is especially important to help traumatized adolescents integrate these challenging constructs and beliefs into their world views. Otherwise, such disruptions may have long-term effects as a result of their consequences on development.

The social support constructs can also be explained in terms of sense of self and basic world assumptions. Tedeschi and Calhoun (2004) argue that others can be supportive through offering different perspectives that can be integrated into schema change. This applies to the observed theme of 'need for guidance and direction on how to cope.' Many

of the participants found it helpful to receive advice and other's perspectives regarding the situation and post-trauma challenges. Such perceived benefits may have arisen as a result of their effects on processing and schema change. The above authors go on to discuss that mutual support is a particularly helpful form of social support, as shared experience can influence the trauma survivor's willingness to integrate new schemas. In the present study, adolescents described feeling better understood by those who had experienced similar situations to themselves. Such sources of social support may have been deemed as able to offer more credible advice, as Tedeschi and Calhoun (2004) suggest. The concept of empathy from individuals that could relate may also play a factor in reassuring these trauma-exposed individuals (Ferguson et al, 2010). Therefore, social support is also influential in helping distressed individuals re-establish their post-trauma sense of self in relation to their basic assumptions about the world.

What this research suggests is that the sense of self is an underlying influential concept in coping with trauma and distressing situations; particularly in the adolescent population. Therefore, treatments need to consider core beliefs and world assumptions as the basis of intervention for traumatised adolescents. Cognitions are a key factor in processing such trauma-related information in relation to pre-existing schema; thus, cognitive focused interventions may be the most applicable form of help for these individuals. Such treatments include cognitive-behavioural therapies; in particular TF-CBT and cognitive restructuring to help understand and reappraise any dysfunctional or challenging cognitions arising from the traumatic experience. Research has already shown that adolescents with PTSD benefit from such interventions (Cohen et al, 2003). This study further evidences the need for these types of treatments as opposed to other forms of support.

This study is not without its limitations though. Participant's reports relied on retrospective recall regarding the experiences and thus may not be a completely accurate representation of what they went through. However, due to the distressing nature of such experiences and the integration of them into each participant's sense of self, one would expect these to be fairly salient memories with a certain degree of accuracy. All the participants were undergraduate university students, who generally suffered from upsetting, yet naturally occurring, traumatic experiences rather than life-threatening traumas. One could argue that these events do not fully represent the vast array of traumatic experiences that could affect an adolescent, and this may be true. Investigation of adolescent coping in the aftermath of life-threatening trauma is a potential area of further study. Due to the nature of interpretative phenomenological analysis (IPA) and the concept of double hermeneutics, there is the possibility of misinterpretation of these participants' post-trauma coping experiences. However, the analysis involved an in-depth study of transcripts from ten participants, which is a relatively large sample for an IPA investigation. Additionally, the themes presented apply across all of these individuals, thus one can be fairly confident that they are representative of this population. Therefore, one can conclude that in the aftermath of psychological trauma, adolescents struggle with integration of challenging traumatic experiences into their existing schemas regarding sense of self and world assumptions. Once the emotional intensity of such challenges has diminished, these individuals use a variety of cognitive processing coping strategies to integrate such information into their existing self-concepts. Re-establishment of a stable sense of self and basic world assumptions enables the trauma-exposed adolescent to move forward with their life, with a potentially altered, but intact sense of identity.

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