The Relationship between Exposure to Trauma and Child Social Phobia

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العلاقة بين التعرض للصدمة والمشكلات النفسية لدى الأطفال

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الملخص

تهدف الدراسة الحالية للتعرف على دور العوامل الوسيطة، مثل الاستجابات الوالدية، في العلاقية بين التعرض للصدمة واضطراب الرهاب الاجتماعي. تكونت عينة الدراسة من ٨٩ طفل ووالديهم، منهم ٤٧ ولد ٤٢ بنت، متوسط الاعمار للعينة ١٣,٠٩، بانحراف معياري ٢,٥٣، وكان عدد الإباء المرافقين لأطفالهم ٣٤ وعدد الأمهات ٥٥، بمتوسط عمر ٩٩,٤٦، وانحراف معياري ٧,٤٢. وتوصلت نتائج الدراسة إلى أن الاستجابات الوالدية بشكل خاص تؤثر في العلاقة بين التعرض للصدمة واضطراب الرهاب الاجتماعي مع مستوى القلق للوالدين، وتؤثر بشكل جزئي في انخفاض الدفء العاطفي مع الضغوط النفسية للوالدين، ولم يكن هناك أي دور للمشكلات العقلية في هذه العلاقة.

الكلمات المفتاحية: الصدمة، الرهاب الاجتماعي، القلق، الضغوط الوالدية، الصحة العقلية.

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Abstract

The aim of the current study is to investigate the role of mediating factors such as parental responses in the relationship between exposure to trauma and social phobic disorders. The study was conducted by using samples of 89 children which included 47 boys and 42 girls; mean age =13.09, SD=2.53 and 89 parents of 34 fathers and 55 mothers; mean age =46.99, SD = 7.42. The relationship between exposure to trauma and social phobic disorders was mediated by parental responses Specifically, the anxiety level of parents, was partially supported by parental stress and lack of emotional warmth, but not parental anxiety or other mental health problems, which were found to contribute to this association.

Keywords: Trauma, Social phobia, Anxiety, Parental stress, Mental health.

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Introduction

Definitions and Concepts of Trauma

The term trauma has been defined by the Diagnostic Classification System (APA, 2013) as resulting from exposure to actual or threatening events such as death or serious injury, or sexual violence. The individual who suffers trauma may be exposed directly or may have witnessed these events. McFarlane and Yehuda (1996) add that, in spite of the concerns about stigmatizing individuals with psychiatric labels, the PTSD diagnosis appears to provide victims with legitimization and justification of the psychic distress, therefore helping them to make sense out of their experiences. It has also helped to change societal attitudes and enhanced victim empathy (Van der Kolk, McFarlane, & Van Der Hart, 1996). Scaer (2001) affirms that symptoms like re-experiencing, avoidance and arousal defined in the DSM-IV (1994) are not sufficient to identify traumatic stress, but should also include somatic and co- morbid symptoms associated with the previous traumatic experience.

Definitions and Concepts of Social Phobia

Social phobia was initially defined in 1980 by the American Psychiatric Association as "a persistent fear of one or more situations (the socially phobic situations) in which the person is exposed to possible scrutiny by others, and fear that he or she may do something or act in any way that will be humiliating or embarrassing" (APA, 1987). SP also includes the fear of humiliation and embarrassment due to the anxiety of the individual that is unable to interact with unfamiliar people, and in social settings such as parties, public speaking or dining out (APA, 1994). According to the DSM-5 classification, the essential defining characteristics are:

1) A marked and persistent fear of social or performance situations in which embarrassment may occur;
2) Exposure to the social or performance situation almost invariably provokes an immediate anxiety response (APA, 2013).

A major difficulty for people who suffer from SP is a fear that is excessive or unreasonable (Van Velzen, Emmelkamp, & Scholing, 2000). Furthermore, phobic people cannot balance such fear with the circumscribed situation (Stemberger, Turner, Beidel, & Calhoun, 1995). Normally, individuals have the essential social skills to be effective in their interactions with others (Kashdan & Steger, 2006). However, it is their fear of negative evaluation that prevents them from interacting. Instead, fear leads to avoidance of situations or focus on their own internal physiological reactions to anxiety (Spector, Pecknold, & Libman, 2003). Consequently, they can appear to others as disinterested in social relations, as they avoid meeting with new people, making conversations and attending social activities, as well public speaking and functioning (Kashdan, 2002).

Trauma and Psychopathology

Calhoun and Tedeschi (1999) show that individuals that survive trauma experience

emotional distress that can manifest itself through worry and fear, shame and apprehension, guilt and terror, depression and anxiety, anger and irritability. Among the disorders most commonly linked with exposure or the aftermath of traumatic events is PTSD, anxiety, and depression (Agaibi & Wilson, 2005; Copeland, Keeler, Angold, & Costello, 2007; Creamer, O'Donnell, & Pattison, 2004; O'Toole & Catts, 2008; Papageorgiou et al., 2000). Some research suggests common trends of comorbidity of the three disorders in child trauma victim's mechanisms (Robert S Pynoos, Goenjian, & Steinberg, 1995). Whereas PTSD develops as the direct outcome of trauma; depression has been shown to be linked with post-trauma life events (Giannopoulou et al., 2006). Tiet et al. (1998) reported that an accumulation of adverse life events can lead to an increase in the risk of psychiatric disorder. Very little research has been aimed at investigating why psychopathology increases in children and adolescents following trauma, especially those suffering from PTSD. There are few studies that investigate between trauma and social phobia in general, but no studies link between mediating factors of trauma and social phobia.

Mediating Factors between Experience of Trauma and Psychopathology

Not all children develop PTSD, depression, or anxiety disorders as a result of trauma or its resulting adversities (Joseph et al., 1997). Research points to a number of factors mediating marked variations in the nature, severity, and duration of psychological responses in children and adolescents following trauma. These factors are usually attributed to the three main domains of research. First domain contains the research studies focused on the individual characteristics of the child though often attempt at attributing development of emotional disorders in a child following a traumatic event to their gender, ethnicity, or age received varied and, at times, contradictory support (REF). Second research domain focuses on family factors like history of psychopathology in the family. Many studies have shown a strong link with parental history of mental illness and the development of PTSD and other emotional disorders in children and adolescents following a traumatic event (Berg-Nielsen, Vikan, & Dahl, 2002; Crethar, Snow, & Carlson, 2004; Robert S Pynoos et al., 1995).

The final and third domain focuses on wider environmental factors, such as parenting and culture as mediators of symptoms of emotional disorders in children. However, even though some research has indicated that parenting can act as a protective factor and reduce severity of PTSD, depression, and anxiety symptoms following a traumatic event, much less is known about the mechanism by which it occurs (Ehntholt & Yule, 2006; Gewirtz, Forgatch, & Wieling, 2008; Osofsky, 1999; Pine, Costello, & Masten, 2005).

Parenting

While the effects of a traumatic event on a child's psychological development or a diagnosis of PTSD is generally culturally invariant factors, parenting is mainly seen as a culturally-bound concept. As parents are clearly central to child development, they can be as much a cause, through abuse or neglect, as a solution, through attentive and warm parenting, of mental health problems resulting from trauma. Limited evidence is available, how parenting is varied culturally, especially in mediating the relationship between the psychological development of the child and exposure to trauma and following life events. Therefore, parenting, as a form of culture and a strong buffer for the development of emotional disorders, needs further and more detailed investigation (Alsayed, 2016).

Types of Trauma

In recent years, the developments in research centers in the field of trauma have led many researchers to conclude that the term 'traumatic event' is broad and includes several components (Fullerton, Ursano, Norwood, & Holloway, 2003). These types of traumas are presented in three categories which are: human-induced, such as (physical abuse, sexual abuse, emotional abuse, neglect, demotic violence, and war), transportation accidents and natural disasters (Alsayed, 2013).

Responses to Trauma

Several researchers have examined why some children develop psychopathology when exposed to trauma, while others do not, and which factors account for the marked variation in the nature, severity and duration of responses. The establishment of risk factors would enhance the quality of assessment and interventions, with a more effective use of resources. The literature presents some evidence on mediating factors, which are usually grouped into three categories and are often linked with traumatic experiences of the individual child and to the trauma factors (family and the wider environment) (Green, Grace, & Gleser, 1985; Pfefferbaum, 1997; Tucker, Pfefferbaum, Nixon, & Dickson, 2000; Udwin, Boyle, Yule, Bolton, & O'Ryan, 2000).

Severity and proximity are dependent on exposure to the traumatic event and have emerged as predictors in many studies (Keller, Herzog, Lavori, Bradburn, & Mahoney, 1992; Lonigan, Phillips, & Richey, 2003; Yule & Williams, 1990). Layne et al. (2001) found that children who were present at a school during a sniper attack reported higher levels of PTSD symptomatology than those who were exposed indirectly, for example, by hearing about the attack. Anthony et al. (2005) found that the degree of exposure to a hurricane was associated with the intensity of anxiety symptoms. Other characteristics of natural disasters which have been less fully investigated include witnessing death or injury and being separated from one's family (Van Hooff, McFarlane, Baur, Abraham, & Barnes, 2009).

Findings on the influence of individual characteristics like age, gender and ethnicity have been inconclusive. Some studies have established that females are more liable to report PTSD than boys as well as other emotional disorders, but this pattern is not consistent across all research. Similarly, it is difficult to draw definite conclusions on the impact of age and ethnicity (Blom, 1986; Groome & Soureti, 2004; R.S. Pynoos et al., 1987; Schnurr & Green, 2004; Steinberg, Brymer, Decker, & Pynoos, 2004; Udwin et al., 2000). Koplewicz et al. (2002) indicate that a number of mediating age factors in response to the disaster might explain these contradictions. These include the variation with age in the evaluation of disasters, coping strategies and children's beliefs about the determinants of traumas.

In contrast, there have been few studies on the effects of pre-trauma temperament. Children with past physical or emotional vulnerabilities are more likely to develop PTSD symptoms (Buka, Stichick, Birdthistle, & Earls, 2001; Kilpatrick et al., 2003; Terr, 1995; Yule et al., 2000). Tsui (1990) found that the survivors of the sinking of a ship (the Jupiter) who had higher academic skills pre-trauma were more likely to have better psychosocial outcomes.

As regards to post-trauma factors, children's functioning after a traumatic event has been widely associated with parental adjustment (Punamäki, Qouta, & El-Sarraj, 2001; Scheeringa & Zeanah, 2001; Smith, Perrin, Yule, & Rabe-Hesketh, 2001). This could be explained by parents suffering from PTSD, and/or not providing emotional support. The survivors of the Buffalo Creek dam disaster were followed up for two years by Korol, Kramer, Grace, and Green (2002), who found that the strongest predictors of outcome were the parents' level of irritability and the family atmosphere. These parental factors will be considered in the next section.

Parental Psychopathology

The family is the first line of protection and safety as regards exposure to trauma; the quality of the parent-child interaction is principally important. On the other hand, parents who cannot cope with stress may adversely affect their children. In a study of children exposed to a dam collapse Green et al. (2000), found that parental mental health symptoms such as irritability or depressed mood were predictive of children's PTSD symptomatology. Young people were more affected by the reactions of their parents. It is possible that younger children were more likely to receive care from older siblings, who would, therefore, adopt a parenting role which acted as an additional stressor. Korol, Green, and Gleser (1999) found that children living close to a nuclear waste reactor reported more PTSD symptoms than their parents.

Smith et al. (2001) studied children's and mothers' reactions to trauma in Bosnia and found that 58% of both children and their mothers suffered from high levels of PTSD, while a substantial proportion reported depression and anxiety. Laor and Wolmer (2000) examined mothers and children with PTSD symptoms after a Scud missile attack in Israel. They found that a large number of children had PTSD and that these symptoms were also associated with mothers' pathological reactions. Gurwitch, Sullivan, and Long (1998) established that a family's reaction could moderate the negative effects of trauma on children and therefore help their children's coping and adjustment. Thabet, Ibraheem, Shivram, Winter, and Vostanis (2009) studied children in Gaza Strip (a war zone) a war zone and established an inverse relationship amid parental support and children's PTSD reactions, confirming earlier findings in children exposed to various types of trauma (Gil-Rivas, Holman, & Silver, 2004; Khamis, 2005; Zahr, 1996). Parents provide a safety zone, comfort and encouragement; children are influenced by their parental attitudes, emotional well-being and the help they provide to face adversity. When any of the parenting components is adversely affected by trauma, this is likely to impact on the child's well-being. Several earlier studies have been criticized for not identifying the gender effects among parents, or which parent may have more impact on girls or boys.

Comorbidity of PTSD and Social Phobia

There are several possible factors underlying the social dysfunction in veterans with PTSD. One possible explanation is that there may be a high rate of social phobia among patients with PTSD. Some indirect support for this hypothesis comes from previous studies that have found both high rates of comorbidity amongst the anxiety disorders e.g; (Orsillo, Heimberg, Juster, & Garrett, 1996; Rapee, Sanderson, & Barlow, 1988; Sanderson, DiNardo, Rapee, & Barlow, 1990) and a particularly high likelihood that social phobia would occur as an additional anxiety disorder (e.g., (Brown & Barlow, 1992; Rapee et al., 1988; Sanderson et al., 1990). Unfortunately, none of these studies examined patients with PTSD, presumably because patients with PTSD may be more likely to present to Veterans Affairs Medical Centers or trauma clinics than anxiety disorders research programs. Thus, this line of research does not provide evidence for (or against) a relationship between social phobia and PTSD. There is also a paucity of research examining the occurrence of social phobia in populations with PTSD. Several studies examining comorbidity among veterans with PTSD, including the National Vietnam Veterans Re-Social Phobia and PTSD 237 adjustment Study (Kulka et al., 1990), examined only a select group of disorders and excluded social phobia. Others did not clearly state whether social phobia was assessed or not (e.g., (Davidson, Kudler, Saunders, & Smith, 1990; Orsillo et al., 1996). Finally, while some comorbidity studies assessed social phobia, they grouped all anxiety or phobic disorders together in their report, obscuring possible differences among them (e.g., (Helzer, Robins, & McEvoy, 1987; Norquist, Hough, Golding, & Escobar, 1990). Of 12 studies reviewed for this paper which assessed psychopathology in Vietnam veterans or comorbidity of other disorders with PTSD, only three provide data specific to social phobia. Interestingly, two of these studies found social phobia to be one of the most prevalent co-occurring disorders ranging in rates from 17-50% for lifetime prevalence (Escobar et al., 1983; Roszell, McFall, & Malas, 1991) Douglas Kauthor author McFall, Miles Eauthor author Malas, Kenneth Lauthor authors contributors titles title Frequency of symptoms and concurrent psychiatric disorder in Vietnam veterans with chronic PTSD title secondary-title Psychiatric services secondary-title/titles periodical full-title Psychiatric services full-title periodical pages 293-296 pages volume 42 volume number3 number dates year 1991 year datesisbn 1075-2730 isbnurls urls record Cite EndNote. Unfortunately, these studies are somewhat methodologically limited in that no non-PTSD comparison group was used. In the third, (Orsillo et al., 1996) compared rates of current and lifetime social phobia among outpatient Vietnam veterans with and without PTSD. Veterans with PTSD were significantly more likely to be assigned a diagnosis of social phobia (14%) than veteran without PTSD

(7%). Although these studies provide some preliminary evidence for a high prevalence rate of social phobia among veterans with PTSD, these results need to be replicated in other samples. Furthermore, the implications and importance of the relationship between social phobia and PTSD have not been explored. Thus, in addition to simply assessing the rates of comorbid social phobia among veterans with PTSD.

PTSD Co-Morbidity with Other Mental Health Problems

PTSD can occur simultaneously with psychosomatic complaints and somatization disorders (Clay-Warner & McMahon-Howard, 2009; Escalona, Achilles, Waitzkin, & Yager, 2004; McCarroll, Ursano, Fullerton, Liu, & Lundy, 2002), alcohol and substance abuse (Wallace & Muroff, 2002), conduct disorders (Famularo, Kinscherff, & Fenton, 1991; Spatz Widom, DuMont, & Czaja, 2007), or depression (Eksi & Braun, 2009; Vranceanu, Hobfoll, & Johnson, 2007).

The US National Comorbidity Survey found that 88% of male and 79% of female children diagnosed with PTSD also met criteria for other psychiatric diagnoses (Kilpatrick et al., 2003). Several studies revealed that depression and anxiety were the most prevalent co-morbid disorders (Breslau, 2009; Creamer, Burgess, & McFarlane, 2001; Goenjian et al., 2000; Kar & Bastia, 2006; Kessler et al., 1995; Nelson et al., 2002; O'Donnell et al., 2004; Rojas, Ariz & Kinder, Bill, 2009; Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997; Udwin, Boyle, Yule, Bolton, & O'Ryan, 2000). Among children who had experienced war in Bosnia, those suffering from PTSD were also likely to report depression and anxiety (Papageorgiou et al., 2000). Similarly, after an earthquake in Armenia, high rates of co-morbidity between PTSD, depression, and anxiety were established, and these were mainly linked with separation from family members (Goenjian et al., 1995). Finally, many studies found long-term continuities in emotional disorders (Di Gallo & Barton; Di Gallo, Barton, & Parry-Jones, 1997; Gillies, Barton, & Gallo, 2003; Stallard, Salter, & Velleman, 2004)

In summary, the evidence on how exposure to different types of trauma can affect the quality of a child's life it has been discussed. A considerable percentage of survivors of trauma reported physical or psychological presentations or both. A number of factors have been found to place children at risk or to protect them in the presence of trauma. Most research has demonstrated a direct link between exposure to trauma and PTSD, with some evidence on how trauma can lead to other emotional disorders such as anxiety or depression. On the other hand, there is also a gap in knowledge on the relationships between exposure to trauma and social phobia, and whether any mediating factors play a role in this association.

Research Objective

There are, however, few studies which have investigated the social phobia and anxiety following more general traumatic events; in particular, trauma in the daily life of children such as through marital problems, financial crises, and/or loss of a person dear to the child. The aim of this study is to investigate the relationship between exposure to trauma and social phobia in children attending child mental health services in Riyadh, Saudi Arabia – an area quite different culturally from the West, with a unique portrayal of parental roles and family structure. Considering that a lot of valuble studies on adverse life effects in childhood and adolescence are retrospective adult self-report accounts, this study takes a more direct approach by including both children and their parents in the study to explore these issues (Follette, 2006)).

Method

Sample

The clinical sample for the study consisted of 89 children (47 boys and 42 girls; mean age =13.09, SD=2.53) and 89 parents (34 fathers and 55 mothers; mean age=46.99, SD= 7.42) selected through three main treatment facilities in Riyadh city: Fahad Hospital (N=40), Alamal Complex (N=30) and the Riyadh Military Hospital (N=19). All child participants were diagnosed emotional disorders. The choice of word missing was confined to first-time

referrals, to ensure clinical homogeneity of disorders before the initiation of treatment. No children participants were younger than nine years as the methodology for the study relied on self-report instruments and so would pose a challenge for younger children.

Measures

The main goal of this study was to investigate the role of mediating factors such as parental responses in the relationship between exposure to trauma and social phobic disorders. Hence, it was necessary to assess the flowing aspects of the child's life: exposure to trauma; the severity of SP; and parenting style of their primary caregiver.

Since the existing measures of experience of trauma, examining children's experiences of natural disasters and community violence (Breslau, Peterson, Kessler, & Schultz, 1999; Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997) are not relevant for Saudi culture and geography, and hence, we developed a new measure more fitting the goals of our study. The new Exposure to trauma (ET) scale covers life events such as family problems, including domestic violence and divorce; neglect; financial crisis; clashes with authority (police, courts); criminal attacks; exposure to parental mental illness; chronic diseases; disability; and exposure to accidents on public or private transport.

The ET consisted of 19 items and its purpose was to assess the effects of trauma through the child's self-report. The measure was simplified to suit the children's understanding. Each child was asked about life events or problems that s/he may have faced directly, those involving another family member and being affected by others' experiences. Responses to each item were on a two-point scale (Yes or No). Since this was a purposefully designed measure, three methods of scoring and analysis were used, based on individual item scores, factor scores (groups of items) and total scores. All children and their parents completed this scale individually. Their responses were found to be identical to the entire sample, as the correlation between the child's and parent's response was r = 1. For this reason, the final measure represented both. As this measure was developed by the researcher, it required further psychometric investigation and factor analysis, as with the Social Phobia questionnaire.

The ET items were associated with total scores, with correlation values ranging from 0.20 to 0.70. Items of the newly developed ET measure were entered into a principal component analysis (PCA) with varimax rotation. A criterion of 0.30 was used to determine item loadings and an eigenvalue equal to or greater than 0.1 was used to decide the number of factors to be retained. A screen test was also used. The sample size was found to be adequate, as indicated by Bartlett's test of sphericity ($x^2 = 507.30$ (171), $p < 0.000$). A seven-factor solution was extracted. Eigenvalues of the seven factors were 2.80, 2.07, 1.86, 1.82, 1.69, 1.54 and 1.22. The overall solution explained 68.47% of the total variance. The scree plot was not interpretable, so it was decided to retain and rotate the seven factors.

The major of Social Phobia symptoms comprised 25 items and used clear language designed for the age group of 9-16 years. Following the format of measures described in the literature, each item was scored on a three-point scale: Not at all = 0, Sometimes = 1, Often = 2. The maximum total score on the SP was 50. SP-Parent and Child items were found to be correlated with the total score, with values ranging from 0.40 to 0.90. The correlation of total Social Phobia scores between children and parents was 0.92 (p=0.01) (Alsayed, 2013).

1- Parenting was assessed on two scales: Parental Rearing Style (EMBU-C) a shortened 52-item scale assessed perceptions of parents' rearing practices (Markus, Lindhout, Boer, Hoogendijk, & Arrindell, 2003)

The EMBU-C scales have been found to be little to moderately intercorrelated. A joint higher order analysis (PCA with varimax rotation) `of the mothers' and fathers' scales yielded three factors with eigenvalues greater than 1. Cumulatively, these explained 80.8% of the total variance (Markus et al., 2003). Reliability analysis revealed that the alpha coefficients for the Emotional Warmth and

Rejection scales were high. In accordance with previous research with the EMBU, the alpha coefficients for Overprotection and Favouring Subject were smaller in magnitude. The mean inter-item rs for the four item-sets, for both the fathers' and mothers' ratings, were acceptable according to the criteria of Briggs and Cheek (1986). In view of the magnitudes of the homogeneity figures, the alpha coefficients may be considered to have attained acceptable values. In that same study, Pearson correlations were determined between each EMBU-C scale and the trait anxiety scale of the State-Trait Anxiety Inventory for Children (STAIC) for 37 children. The correlations of trait anxiety with Rejection (F: 0.41, P=0.006; M: 0.27; P<0.05, one-tailed, n= 37) and with Overprotection (F: 0.29, P=0.04; M: 0.38; P<0.01, one-tailed, n= 37) indicated that anxious children had higher scores. The correlations between trait anxiety and Emotional Warmth were not significant. Despite the wide use of the EMBU-C in different countries such as Spain, South Africa and Japan (Castro, Toro, Van der Ende, & Arrindell, 1993; Mofrad, Abdollah, & Samah, 2009; Niditch & Varela, 2011; Van Gastel, Legerstee, & Ferdinand, 2009), the researcher could find no study of Arabic speakers that had used it. However, the positive evidence on its psychometric properties justified using it in the current study. The instrument investigates parenting styles and parent-child relations, which in general have similarities across cultures. Besides, the instrument had been used in several cultures and languages, making it flexible for further use.

2- Parenting Stress Index (PSI) - Short Form (SF)measure of the magnitude of stress in the parent and child interactions and its source (Loyd & Abidin, 1985). The correlations between the PSI/SF and the full-length PSI were estimated in a sample of 530 mothers and their children who attended a pediatric clinic in Virginia City, USA. Total Stress on the full-length PSI correlated at 0.94 with the PSI/SF Total Stress, which is exceptionally high and comparable to the two-week test-retest reliability of the full-length PSI, which is 0.95. Examination of the pattern of correlations suggests that the PD subscale score was highly correlated with the Parent Domain score of the full-length PSI (r=0.92), which was expected, as the PD Subscale consists of items derived from the Parent Domain subscale. Similarly, the score on the DC subscale, derived from the Child Domain subscale of the full-length PSI, was strongly correlated with it (r=0.87), as was expected. The correlation of the P-CDI score with the Child Domain and Parent Domain scores of the full-length PSI were lower, at 0.73 and 0.50 respectively. These lower correlations were also expected because the P-CDI subscale contains items from both the Child and Parent Domains of the full-length tool (Abidin, 1995).

Test-retest reliability was established at 0.84 for PD, 0.68 for P-CDI, 0.78 for DC and 0.84 for Total Stress. Reliability was assessed by a re-test at an interval of six months. Coefficient alpha was calculated as 0.87 for the PD, 0.80 for the P-CDI, 0.85 for the DC and 0.91 for Total Stress, based on a normative sample of 800 subjects. In addition, Roggman, Moe, Hart, and Forthun (1994) studied 103 parents attending the Head Start parenting programme in the USA and reported PSI/SF alpha reliabilities of 0.79 for the PD, 0.80 for the P-CDI, 0.78 for the DC and 0.90 for Total Stress.

Ultimately, General Health Questionnaire (GHQ) measured (of) generic mental health problems. At a score of 11/12 in the maximum of 36 indicated possible problems (Montazeri et al., 2003; Ye, 2009). An earlier study in Germany investigated the screening properties of the GHQ-12 in primary care patients compared with the Symptom CheckList (SCL-90-R), finding a correlation between the instruments of 0.64 and no difference in the performance of the general scores; both questionnaires were able to identify symptoms (Schmitz, Kruse, Heckrath, Alberti, & Tress, 1999). The internal consistency of the questionnaire was measured using Cronbach's alpha. The coefficient for the whole sample was found to be 0.87 for both males and females (Montazeri et al., 2003).

Research Procedure

Data collection lasted over a period of six months. The Local Ministry of Health Ethics

Committee granted ethical approval for this research project, which guaranteed participation from The King Fahd National Guard Hospital, the Riyadh Military Hospital and Al-Amal Complex for Mental Health (Hospital).

From then on, the procedure was divided into three phases. In phase one, the hospitals provided information on the number of patients attending outpatients' clinics and the approximate nature of their cases in order to recruit the sample. The head of the Psychology Department and/or the person in charge of the outpatient clinics received a comprehensive description of the study and also gave their permission. subsequently, we liaised directly with the physician such that any cases with initial clinical diagnoses of emotional disorders could be referred directly, or by later appointment to the researcher.

In phase two, families and children were given information and the opportunity to consent to take part in the study upon their visit to the hospital. If consent were granted, parents of the referred child took part in a diagnostic interview. Children with a confirmed diagnosis of emotional disorders were included in the study.

In phase three, parents and children completed the questionnaires consisting of generally, Parental Rearing Style (EMBU-C), a shortened 52-item scale assessed perceptions of parents' rearing practices (Markus et al., 2003); and Parenting Stress Index (PSI) - Short Form (SF) measure of magnitude of stress in the parent and child interactions and its source (Loyd & Abidin, 1985). Finally, General Health Questionnaire (GHQ) measured of generic mental health problems. At a score of 11/12 in the maximum of 36 indicated possible problems (Montazeri et al., 2003; Ye, 2009). Given the low response rate for take-home questionnaires, participants were advised to complete the questionnaires before leaving the hospital after their diagnostic interview.

Results

This section reports the statistical analysis undertaken to establish whether social phobia was predicted by a combination of trauma, mediating and demographics variables, and to test whether other types of psychopathology were predicted in the same way. The main aim of the analysis was to determine which independent and mediating variables considerably predicted outcome variables. This study was largely concerned with social phobia as the dependent variable, but also had some interest in general mental health problems and in their relationships with trauma and parenting variables. The independent variables entered in the model, therefore, were emotional trauma, demographic variables, EMBU-C, GHQ and PSI scores. As in the univariate analysis, trauma was considered in terms of a total score (ET), of the total score on each subscale (ETS 1-6), or of the dichotomous variable of having experienced any trauma or not (groups ET1 and ET2) in separate analyses.

The possible mediating variables consisted of demographic (the participant's gender, age, and standard of living for the family) and parental variables. The latter consisted of the following instruments: 1) Parental Rearing Style (EMBU-C), including the subscales of Emotional Warmth, Rejection, Over-protection and Favouring Subject (the researcher combined EMBU fathers' with mothers' responses, resulting in four subscales scores for each child and parent). 2) Parenting Stress Index (PSI) - Short Form (SF) with total scores and three subscales of Parental Distress (PD), Parent-Child Dysfunctional Interaction (P-CDI), and Difficult Child (DC). In the statistical analysis, both total and subscales scores were included. 3) General Health Questionnaire (GHQ) total scores. The outcome (dependent) variables consisted of the Social Phobia (SP), Only the total scores were used.

Primary Analyses

Univariate associations were first identified. In the multivariate model, the aim was to look at the independent and mediating variables simultaneously with the outcome variables. In other words, using analysis of covariance (ANCOVA), the purpose was to determine whether trauma was associated with child social phobia, taking into consideration demographic and parental variables.

Social Phobia

The findings are presented in three sections, according to the method of measuring exposure to trauma.

Exposure to Trauma Measured as a Total Score

Table 1 shows the association between ET total scores and social phobia symptoms (child scores). Increasing age (F=41.23, p=000), low EMBU-C-Child-Emotional Warmth scores (F=12.54, p=001), and PSI total scores (F=4.37, p=040) were significantly associated with SP scores. The ANCOVA was repeated with age, EMBU-C-Child-Emotional Warmth and PSI total scores as the only covariates, because although the ET total score was not significantly associated with SP scores, yet it was the variable of primary interest; thus, it was necessary to validate whether it predicted SP in the presence of age, EMBU-C-Child-Emotional Warmth and PSI total scores. Parameter estimates (Table2) demonstrate that ET total scores did not make an important contribution; besides, the correlation of age with PSI total score and SP remained positive, which means that SP scores increased with age and PSI total scores. The correlation between EMBU-C-Child-Emotional Warmth and SP was negative, i.e. lack of parental warmth was a major predictor. In summary, age, lack of parental warmth and parenting stress predicted social phobia symptoms, but not the exposure of children to trauma. Parameter estimates are presented in detail in Table2, but in subsequent analyses, only the positive findings are quoted.

Table 1: ANCOVA between ET total scores, SP-Child scores covariates

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	4.128	1	4.128	.038	.845
Age	**4422.511**	**1**	**4422.511**	**41.226**	**.000**
Standard of living for the family	.294	1	.294	.003	.958
ET-total score	12.867	1	12.867	.120	.730
EMBU-C-Parent-Emotional Warmth	16.243	1	16.243	.151	.698
EMBU-C- Parent-Rejection	234.520	1	234.520	2.186	.144
EMBU-C- Parent-Overprotection	11.438	1	11.438	.107	.745
EMBU-C- Parent-Favouring Subject	13.455	1	13.455	.125	.724
EMBU-C-Child-Emotional Warmth	**1345.341**	**1**	**1345.341**	**12.541**	**.001**
EMBU-C-Child-Rejection	.002	1	.002	.000	.997

EMBU-C-Child-Overprotection	1.576	1	1.576	.015	.904
EMBU-C-Child-Favouring Subject	20.683	1	20.683	.193	.662
Parental Stress Index total score	**468.468**	**1**	**468.468**	**4.367**	**.040**
General Health Questionnaire	63.146	1	63.146	.589	.445

Table 2: Parameter estimates of model including ET total scores

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound	
Age	2.921	.426	6.857	.000	2.074	3.769
ET-total score	.329	.712	.462	.645	-1.086	1.744
EMBU-C-Child-Emotional Warmth	-.384	.079	-4.866	.000	-.541	-.227
PSI-total	.172	.077	2.227	.029	.018	.326

As the PSI has three subscales, the analyses were repeated with the PSI total scores being replaced by subscale scores; only positive findings are presented.

The same tests were repeated for social phobia scores as rated by the parent. Table 3 shows that age (F=55.30, p=000), EMBU-C-Parent-Rejection (F=4.33, p=041) and lack of EMBU-C-Child-Emotional Warmth (F=8.67, p=004) were significantly associated with SP scores. In particular, ET (total) scores did not make a significant contribution in predicting SP symptoms when age, EMBU-C-Parent-Rejection, and EMBU-C-Child-Emotional Warmth were taken into account.

Table 3: ANCOVA between ET total scores, SP-Parent scores covariates

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	11.025	1	11.025	.131	.718
Age	**4638.407**	**1**	**4638.407**	**55.298**	**.000**
Standard of living for the family	.009	1	.009	.000	.992
ET-total score	16.330	1	16.330	.195	.660
EMBU-C-Parent-Emotional Warmth	23.012	1	23.012	.274	.602
EMBU-C- Parent-Rejection	**363.378**	**1**	**363.378**	**4.332**	**.041**

EMBU-C- Parent-Overprotection	5.395	1	5.395	.064	.801
EMBU-C- Parent-Favouring Subject	8.254	1	8.254	.098	.755
EMBU-C-Child-Emotional Warmth	**727.639**	**1**	**727.639**	**8.675**	**.004**
EMBU-C-Child-Rejection	29.039	1	29.039	.346	.558
EMBU-C-Child-Overprotection	62.512	1	62.512	.745	.391
EMBU-C-Child-Favouring Subject	125.671	1	125.671	1.498	.225
Parental Stress Index total score	148.956	1	148.956	1.776	.187
General Health Questionnaire	10.895	1	10.895	.130	.720

Exposure to Trauma Measured as a Category (any exposure vs. no exposure)

In the next step, the ET total scores were replaced by a dichotomous variable: whether or not the child had been exposed to any trauma (ET groups). The findings with SP-Child scores as the dependent variable are presented in Table 4. Age (F=39.94, p=000), lack of EMBU-C-Child-Emotional Warmth (F=14.01, p=000) and PSI-total scores (F=4.05, p=048) again significantly contributed to the association with total SP scores. The ANCOVA was repeated with significant variables and ET group status. Parameter estimates (Table 5) show that exposure to any trauma was significant ($p<0.05$), in addition to the previous variables (age, EMBU-C-Child-Emotional Warmth, and PSI total score), in predicting SP scores. Table 6, using the estimated marginal means test, also shows the significant difference in SP scores depending on whether the child had been exposed to any trauma. This analysis suggests that although the severity of trauma was not found to predict social phobia symptoms, exposure to trauma made some contribution, together with the child's age, parental lack of warmth and parental stress.

Table 4: ANCOVA between groups of any or no exposure to trauma, SP-Child scores covariates

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	16.816	1	16.816	.162	.688
Age	**4135.601**	**1**	**4135.601**	**39.938**	**.000**
Standard of living for the family	.850	1	.850	.008	.928
EMBU-C-Parent-Emotional Warmth	27.830	1	27.830	.269	.606
EMBU-C- Parent-Rejection	122.139	1	122.139	1.180	.281

EMBU-C- Parent-Overprotection	28.317	1	28.317	.273	.603
EMBU-C- Parent-Favouring Subject	13.780	1	13.780	.133	.716
EMBU-C-Child-Emotional Warmth	**1450.595**	**1**	**1450.595**	**14.008**	**.000**
EMBU-C-Child-Rejection	.222	1	.222	.002	.963
EMBU-C-Child-Overprotection	16.493	1	16.493	.159	.691
EMBU-C-Child-Favouring Subject	15.217	1	15.217	.147	.703
ET group status	284.612	1	284.612	2.749	.102
Parental Stress Index total score	**418.998**	**1**	**418.998**	**4.046**	**.048**
General Health Questionnaire	47.781	1	47.781	.461	.499

Table 5: Parameter estimates of model including exposure to any trauma

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
[Without Trauma=.00]	-5.743	2.855	-2.012	.047	-11.421	-.066
[With Trauma=1.00]	0a	.	.	.	.	.
Age	2.811	.417	6.745	.000	1.982	3.640
EMBU-C-Child-Emotional Warmth	-.377	.077	-4.909	.000	-.529	-.224
Parental Stress Index total score	.163	.076	2.161	.034	.013	.314

Table 6: Estimated marginal means test on social phobia scores between groups of any or no exposure to trauma

Exposure to trauma category	Mean	Std. Error	Confidence Interval 95%	
			Lower Bound	Upper Bound
Any exposure to trauma	18.902[a]	2.617	13.697	24.107
No exposure to trauma	24.645[a]	1.125	22.408	26.882

Table 7 shows that two of the above variables were significantly associated with SP-Parent scores, i.e. age (F=55.18, p=000) and lack of EMBU-C-Child-Emotional Warmth (F=10.25, p=002).

Table 7: ANCOVA between groups of any or no exposure to trauma, SP-Parent scores covariates

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	2.154	1	2.154	.026	.873
Age	**4593.066**	**1**	**4593.066**	**55.183**	**.000**
Standard of living for the family	.034	1	.034	.000	.984
EMBU-C-Parent-Emotional Warmth	34.876	1	34.876	.419	.519
EMBU-C- Parent-Rejection	251.488	1	251.488	3.021	.086
EMBU-C- Parent-Overprotection	18.182	1	18.182	.218	.642
EMBU-C- Parent-Favouring Subject	11.047	1	11.047	.133	.717
EMBU-C-Child-Emotional Warmth	**853.495**	**1**	**853.495**	**10.254**	**.002**
EMBU-C-Child-Rejection	48.947	1	48.947	.588	.446
EMBU-C-Child-Overprotection	30.984	1	30.984	.372	.544
EMBU-C-Child-Favouring Subject	109.292	1	109.292	1.313	.256
ET group status	63.560	1	63.560	.764	.385
Parental Stress Index total score	140.726	1	140.726	1.691	.198
General Health Questionnaire	5.295	1	5.295	.064	.802

Although the PSI total scores were not important in this model, the analysis was repeated with PSI total scores being replaced by PSI subscales scores. Table 8 shows that PSI-Parental Distress (F=11.12, p=001) was significantly associated with SP scores.

Table 8: ANCOVA between SP-Parent include Groups of any or no exposure to trauma and PSI subscales

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	.248	1	.248	.003	.953
Age	**4058.054**	**1**	**4058.054**	**56.679**	**.000**
Standard of living for the family	2.870	1	2.870	.040	.842
EMBU-C-Parent-Emotional Warmth	22.285	1	22.285	.311	.579
EMBU-C- Parent-Rejection	245.144	1	245.144	3.424	.068
EMBU-C- Parent-Overprotection	20.829	1	20.829	.291	.591
EMBU-C- Parent-Favouring Subject	106.135	1	106.135	1.482	.227
EMBU-C-Child-Emotional Warmth	**668.062**	**1**	**668.062**	**9.331**	**.003**
EMBU-C-Child-Rejection	11.861	1	11.861	.166	.685
EMBU-C-Child-Overprotection	11.624	1	11.624	.162	.688
EMBU-C-Child-Favouring Subject	**300.977**	**1**	**300.977**	**4.204**	**.044**
ET group status	48.546	1	48.546	.678	.413
PSI-Parental Distress	**796.119**	**1**	**796.119**	**11.119**	**.001**
PSI-Parent-Child Dysfunctional Interaction	94.479	1	94.479	1.320	.255
PSI-Difficult Child	64.624	1	64.624	.903	.345
General Health Questionnaire	8.160	1	8.160	.114	.737

Exposure to Different Types of Trauma (ET subscales category)

At the last step of this analysis, exposure to trauma was measured by ET subscales scores. Table 9 shows that age (F=36.36, p=000), lack of EMBU-C-Child-Emotional Warmth (F=12.81, p=000), PSI total score (F=4.70, p=034) and ET-Subscale-Loss (F=4.97, p=029) all contributed significantly to the prediction of SP symptoms.

The ANCOVA was repeated with significant variables and ET subscales scores. Parameter estimates (Table 10) show that these variables remained significant. In contrast, Table11 shows that the loss item had significantly differentiated SP-Child scores, but in the opposite direction than expected, which casts doubts on the validity of the item, or this could be a random finding.

Table 9: ANCOVA between ET subscales scores, SP-Child scores covariates

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	2.206	1	2.206	.021	.885
Age	**3808.684**	**1**	**3808.684**	**36.357**	**.000**
Standard of living for the family	14.196	1	14.196	.136	.714
EMBU-C-Parent-Emotional Warmth	50.070	1	50.070	.478	.492
EMBU-C- Parent-Rejection	266.600	1	266.600	2.545	.115
EMBU-C- Parent-Overprotection	31.424	1	31.424	.300	.586
EMBU-C- Parent-Favouring Subject	.297	1	.297	.003	.958
EMBU-C-Child-Emotional Warmth	**1342.426**	**1**	**1342.426**	**12.815**	**.001**
EMBU-C-Child-Rejection	7.481	1	7.481	.071	.790
EMBU-C-Child-Overprotection	.331	1	.331	.003	.955
EMBU-C-Child-Favouring Subject	11.909	1	11.909	.114	.737
Parental Stress Index total score	492.742	1	492.742	4.704	.034
General Health Questionnaire	52.376	1	52.376	.500	.482
ET-Subscale-Family problems	22.115	1	22.115	.211	.647
ET-Subscale-Violence/Abuse	12.331	1	12.331	.118	.733
ET-Subscale-Illness/Death	7.433	1	7.433	.071	.791
ET-Subscale-Accident/Disasters	.155	1	.155	.001	.969
ET-Subscale-Peers relationships	106.202	1	106.202	1.014	.318
ET-Subscale-Loss	**520.773**	**1**	**520.773**	**4.971**	**.029**

Table 10: Parameter estimates of the model, including ET subscales scores

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound	
Age	3.015	.414	7.278	.000	2.191	3.839
EMBU-C-Child-Emotional Warmth	-.378	.076	-4.958	.000	-.529	-.226
PSI total score	.173	.075	2.306	.024	.024	.322
[without loss=.00]	22.617	9.788	2.311	.023	3.151	42.082
[with loss=1.00]	0[a]	.	.	.	.	.

Table 11: Estimated marginal means test comparison of children who had experienced loss or not on SP scores

ET-Subscale-Loss	Mean	Std. Error	Confidence Interval 95%	
			Lower Bound	Upper Bound
Without loss	23.996[a]	1.030	21.948	26.043
With loss	1.379[a]	9.732	-17.975	20.733

In addition, Table 13 shows that age (F=44.14, p=000), EMBU-C-Parent-Rejection (F=4.42, p=039) and lack of EMBU-C-Child-Emotional Warmth (F=7.15, p=009) contributed significantly to the prediction of SP-Parent scores.

Table 12: ANCOVA between ET subscales scores, SP-Parent scores covariates

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	46.549	1	46.549	.543	.464
Age	3782.368	1	3782.368	44.145	.000
Standard of living for the family	7.036	1	7.036	.082	.775
EMBU-C-Parent-Emotional Warmth	50.694	1	50.694	.592	.444
EMBU-C- Parent-Rejection	378.899	1	378.899	4.422	.039

EMBU-C- Parent-Overprotection	6.219	1	6.219	.073	.788
EMBU-C- Parent-Favouring Subject	1.536	1	1.536	.018	.894
EMBU-C-Child-Emotional Warmth	612.300	1	612.300	7.146	.009
EMBU-C-Child-Rejection	11.280	1	11.280	.132	.718
EMBU-C-Child-Overprotection	86.868	1	86.868	1.014	.318
EMBU-C-Child-Favouring Subject	93.537	1	93.537	1.092	.300
ET-Subscale-Family problems	30.501	1	30.501	.356	.553
ET-Subscale-Violence/ Abuse	10.044	1	10.044	.117	.733
ET-Subscale-Illness/Death	42.885	1	42.885	.501	.482
ET-Subscale-Accident/ Disasters	.836	1	.836	.010	.922
ET-Subscale-Peers relationships	19.492	1	19.492	.228	.635
ET-Subscale-Loss	203.768	1	203.768	2.378	.128
Parental Stress Index total score	144.834	1	144.834	1.690	.198
General Health Questionnaire	9.456	1	9.456	.110	.741

In the above analysis, PSI total scores were not considerably linked with SP scores. When tests were replaced with PSI subscales scores, Table 13 shows that age (F=47.77, p=000), EMBU-C- Parent-Rejection (F=4.35, p=041), lack of EMBU-C-Child-Emotional Warmth (F=6.40, p=014) and PSI-Parental Distress (F=11.93, p=001) contributed significantly to the prediction of SP scores.

Table 13: ANCOVA between ET subscales scores, SP-Parent scores covariates, and PSI subscales

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	28.852	1	28.852	.393	.533
Age	**3506.760**	**1**	**3506.760**	**47.766**	**.000**
Standard of living for the family	30.147	1	30.147	.411	.524
EMBU-C-Parent-Emotional Warmth	16.804	1	16.804	.229	.634
EMBU-C- Parent-Rejection	**319.101**	**1**	**319.101**	**4.347**	**.041**
EMBU-C- Parent-Overprotection	3.484	1	3.484	.047	.828
EMBU-C- Parent-Favouring Subject	37.390	1	37.390	.509	.478
EMBU-C-Child-Emotional Warmth	**470.253**	**1**	**470.253**	**6.405**	**.014**
EMBU-C-Child-Rejection	1.664	1	1.664	.023	.881
EMBU-C-Child-Overprotection	42.260	1	42.260	.576	.451
EMBU-C-Child-Favouring Subject	274.562	1	274.562	3.740	.057
ET-Subscale-Family problems	19.553	1	19.553	.266	.608
ET-Subscale-Violence/Abuse	62.861	1	62.861	.856	.358
ET-Subscale-Illness/Death	126.394	1	126.394	1.722	.194
ET-Subscale-Accident/Disasters	.423	1	.423	.006	.940
ET-Subscale-Peers relationships	9.271	1	9.271	.126	.723
ET-Subscale-Loss	99.377	1	99.377	1.354	.249
PSI-Parental Distress	**875.961**	**1**	**875.961**	**11.932**	**.001**
PSI-Parent-Child Dysfunctional Interaction	130.754	1	130.754	1.781	.187
PSI-Difficult Child	49.206	1	49.206	.670	.416
General Health Questionnaire	15.873	1	15.873	.216	.643

Discussion

The findings of this study point out that, although the extent of exposure to trauma is not directly associated with social phobia symptoms, yet it can act as a risk factor in conjunction with the child's age, parental stress, and reduced emotional warmth, which all contributed to the model. These findings to some extent support the hypothesis of this research. In other words, exposure to any trauma was considerably linked with the social phobic disorder, even if no close effect was established. This supports an earlier finding by Alnaes and Torgersen (1988) that exposure to trauma in childhood is not directly linked with social phobia, although this study concentrated on stressful events such as loss of family members and financial problems. The findings are, nonetheless, inconsistent with studies which have indicated a direct relationship between exposure to trauma and emotional disorders in general, or with those suggesting that trauma may escalate into a clinically sigmificant form of emotional turmoil. It is also worth noting that these studies, unlike the current research, did not focus on social phobia as a separate condition, but rather targeted the entire group of emotional disorders; nor did they establish an explanatory mechanism to account for the assumed link between social phobia and exposure to trauma (Brozovich & Heimberg, 2011; Erwin, Heimberg, Marx, & Franklin, 2006; Manfro et al., 2003; Meiser-Stedman, Smith, Glucksman, Yule, & Dalgleish, 2007). In addition, the results did not indicate any differences according to the socio-economic status of the family or according to the child's gender.

The exposure to trauma is sigmificantly linked with emotional disorders, and is therefore supported by the findings. The second, that exposure to trauma is also significantly associated with social phobic disorders, is partially supported, and as already discussed, in that exposure to trauma had some effect but there was no linear association with its severity. The relationship between exposure to trauma and social phobic disorders is mediated by parental responses, particularly by the anxiety levels of parents, is partly supported, as parental stress and lack of emotional warmth, but not parental anxiety or other mental health problems, were found to contribute to this association.

Research Implications and Further Recommendations

Investigating a condition like social phobia requires multi-stage recruitment, accumulation of data, development of expertise, and the establishment of links with schools and specialist mental health services. As social phobia is often comorbid with other anxiety disorders, depression, or both, it is rather more difficult to study (APA, 2000; Van Ameringen, Mancini, Styan, & Donison, 1991). Research into this disorder would, thus, be more feasible within an academic institution that has an established ongoing program of research in this field.

In investigating this condition, a longitudinal research design would be more useful; tracking high-risk individuals over a long period would help to identify aetiological factors. It is highly recommended for future studies to attempt to approach these disorders in relation to other relevant factors longitudinally. Such a design would facilitate the better understanding of mechanisms that underpin the association between trauma, other risk factors and PTSD, anxiety and depression. The investigation of these complex and dynamic relationships would promote knowledge of their causal contribution by exploring how they interact and co-vary over time.

As mentioned in the previous section, designing clinical interventions for this group should consider incorporating aspects of parental rearing. This might be constructed as a psycho-education component and delivered directly to parents and other caregivers. Such an intervention might also address parental mental health problems, as these are often associated with poor mental health in children (Coren & Barlow, 2001).

Conclusions

The relationship between children's exposure to trauma and social phobia was investigated in this study. Based on responses gathered in the context of Saudi culture, it found evidence for a partial effect of trauma, mediated by parental rearing style (lack of emotional warmth) and parental stress, on the development of social phobia, an association which became

more apparent with the increasing age of the affected children.

The relationship between exposure to trauma and social phobia in childhood and a young life was explored for the first time in a non-western cultural sample. Equally, applicable variables were derived from predominantly western countries to be tested in the context of the Saudi culture. As social phobia may share universal constructs across cultures, it would be interesting to investigate diagnostic similarities and differences in further cross-cultural research, particularly towards the revision of the major classification systems, ICD-11 and DSM-V. The further understanding of the mechanisms implicated in the development and maintenance of symptoms will inform interventions for children, young people and their families who are at risk of social phobia, or who have already developed impairing mental health presentations.-

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