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The Role of Family Phenomena in Posttraumatic Stress in Youth

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Abstract

Topic—Youth face trauma that can cause posttraumatic stress (PTS).

Purpose—1). To identify the family phenomena used in youth PTS research; and 2). Critically
examine the research findings regarding the relationship between family phenomena and youth
PTS.

Sources—Systematic literature review in PsycInfo, PILOTS, CINAHL, and MEDLINE.
Twenty-six empirical articles met inclusion criteria.

Conclusion—Measurement of family phenomena included family functioning, support,
environment, expressiveness, relationships, cohesion, communication, satisfaction, life events
related to family, parental style of influence, and parental bonding. Few studies gave clear
conceptualization of family or family phenomena. Empirical findings from the 26 studies indicate
inconsistent empirical relationships between family phenomena and youth PTS, though a majority
of the prospective studies support a relationship between family phenomena and youth PTS.
Future directions for leadership by psychiatric nurses in this area of research and practice are
recommended.

Keywords

Family phenomena; posttraumatic stress; trauma; violence; youth

Youth are faced with traumatic events in the form of natural disasters, life-threatening or
chronic illnesses, major acts of violence, trauma, and in everyday events such as witnessing
a knifing, shooting, or being jumped on the street (National Institute of Mental Health,
2010). These events can be traumatic for children and adolescents and can elicit pathologic
stress responses indicative of posttraumatic stress (PTS). As psychiatric nurses working with
youth know, PTS broadly refers to the persistent symptom clustering of intrusive
recollections/re-experiencing, avoidant/numbing symptoms, and hyperarousal symptoms
(American Psychiatric Association [APA], 2000). Posttraumatic stress disorder (PTSD) is
the *clinical diagnosis* that includes this same symptom clustering but has more stringent
diagnostic criteria. The term PTS broadly captures the more general clinically relevant

subdiagnostic symptoms, as well as the symptom clustering meeting diagnostic criteria for PTSD (Kazak et al., 2006).

Responses to traumas are influenced by the severity and duration of the trauma, as well as the immature developmental state of the brain in youth (National Institute of Health, 2005; Pynoos, Steinberg, Ornitz, & Goenjian, 1997; Pynoos, Steinberg, & Piacentini, 1999). The context of family during childhood and adolescence can also influence the response to trauma (Kazak et al., 2006; Kiser & Black, 2005). Consistent literature indicates that family proximity to trauma (e.g. family member dies in event) influences youth PTS (Holbrook et al., 2005; Langeland and Olff, 2008; Scheeringa, Wright, Hunt, & Zeanah, 2006; van der Kolk, 2003; van der Kolk et al., 1996). Likewise, parental mental health can also affect youth PTS (Barakat et al., 1997; Boyer, Ware, Knolls, & Kafkalas, 2003; Kiliç, Özgüven, & Sayil, 2003; Laor, Wolmer, & Cohen, 2001; Meiser-Stedman, Yule, Dalgleish, Smith, & Glucksman, 2006; Ozono et al., 2007). What deserves further exploration is the understanding of how studies have examined family phenomena in association with youth PTS. Family phenomena can be defined as processes related to the nature and characteristics of family life and family groups used by clinicians, researchers, and theorists. Given family phenomena as a potential point of intervention for psychiatric nurses, the nature of family phenomena in youth PTS deserves investigation.

The purpose of this critical review is 1). To identify the family phenomena used in youth PTS research; and 2). Critically examine the research findings regarding the relationship between family phenomena and youth PTS. This review will specifically examine how family phenomena have been measured in studies with youth PTS, what is empirically known about family phenomena in youth PTS, and how psychiatric nurses can provide leadership to future research to improve upon the current state of the science.

For this broad examination, a comprehensive perspective on PTS is needed, one that incorporates a transdisciplinary and cross-cultural perspective regarding trauma beyond a singular focus. The scope of trauma for PTS is not narrow and can encompass child or sexual abuse, exposure to war or family violence, unintentional injuries, stress related to traumatic medical experiences, and community violence. (National Child Traumatic Stress Network, 2010). The nature and severity of the trauma can influence a stress response, just as youth responses to events vary (Terr, 1991; van der Kolk, 2003). Therefore, a non-categorical view of trauma in the context of youth PTS and family phenomena for this review may elicit a better understanding of what family phenomena have been examined in relationship to youth PTS. For the purposes of this manuscript, the term *youth* encompasses both children and adolescents; the term *PTS* will be inclusive of the symptoms indicating the diagnosis of PTSD, subdiagnostic symptoms of PTSD, and pediatric medical traumatic stress. The term PTSD will only be used when reporting on studies that specifically indicate differences between those with and without a clinical diagnosis.

Methods

A literature search in February 2010 in PsycInfo, PILOTS, CINAHL, and MEDLINE was conducted with no date restriction using the key words: 'posttraumatic stress,' 'child(ren),' 'adolescent(ce),' 'youth,' 'family functioning,' 'family support,' 'family cohesion,' 'family environment,' and 'family structure.' Inclusion criteria: peer-reviewed journal articles in the English language; and studies assessing relationships between youth PTS and family phenomena (e.g. functioning, support, or environment). Studies that only examined proximity or involvement of a family member in the trauma were excluded. The search yielded 26 peer-reviewed journal articles of quantitative studies examining the role of family phenomena in youth PTS. Articles with an "*" in the reference list indicate articles from this

search. Studies were analyzed by conceptual definition and measurement of family phenomena, samples surveyed in the 26 studies, conceptual framework and definition of the family, empirical relationships between family phenomena and youth PTS, data analysis strategies, and cultural considerations. Table 1 describes each study by sample, trauma, family phenomena and measure, and relevant findings.

Findings

Conceptual Definitions of Family Phenomena

In the 26 studies, the following family phenomena were examined: family functioning, support, environment, expressiveness, relationships, cohesion, communication, satisfaction, life events related to family, parental style of influence, and parental bonding (see Table 1 for associated studies). All studies cited the phenomena of interest in the literature review or introduction. Eight studies described the models the instruments were based on (Alderfer et al., 2009; Barakat et al., 1997; Boyer, Hitelman, et al., 2003; Boyer, Ware, et al., 2003; Burton et al., 1994; Kazak et al., 1997; Max et al., 1998; Ozono et al., 2007). Although almost all studies explained the instruments, most studies did not give explicit conceptual definitions of the family phenomena prior to instrument description.

Measurement of the Role of Family Phenomena

Eighteen different standardized instruments were used to assess eleven family phenomena. The Family Environment Scale (FES) (Moos & Moos, 1986), including the shortened form (Family Relations Index (FRI)), was the instrument most often used (n=8). One study measured family support by family size and mother's presence in the home (Overstreet, Dempsey, Graham, & Moely, 1999). Measurement of family environment and family functioning intersected. Family environment was consistently measured by the FES, but family functioning was measured by various instruments, including: FACES II, III, and IIIA, Family Assessment Device (FAD) (Epstein, Baldwin, & Bishop, 1983), Family Apgar (Smilkstein, 1978), Family Life Scale (FLS) (Fisher, Ransom, & Terry, 1993), the McMaster Structured Interview of Family Functioning (Miller et al., 1994), Family Functioning Questionnaire (FFQ) (McFarlane, 1987), and the FES (including the FRI). Overlap of the FES measuring family functioning and environment indicated that the two phenomena did not reflect two distinct variables for measurement. The FES was designed to assess interpersonal relationships and overall social environment of the family, and could therefore measure a broad array of family phenomena, such as family functioning (Moos & Moos, 1986). For example, Meiser-Stedman and colleagues (2006) noted that aspects of the youth's family environment included family functioning.

Samples in the Studies

The reference traumas for PTS in the sample of the 26 studies included cancer, spinal cord injury, general violence exposure and trauma, cardiac surgery, home fire, family violence, political violence, natural disasters, sexual abuse, and traumatic brain injury. Youth ranged from ages 5 to 24, from various racial and ethnic backgrounds. Seven different countries were represented: most prevalent was the United States (18 studies), likely due to the bias of inclusion criteria for English language articles only. Fifteen studies included mothers, eleven included fathers, one included siblings, and one specified inclusion of legal guardians in the sample. Six studies had longitudinal designs (Greenberg & Keane, 2001; Laor, et al., 2001; Max et al., 1998; Meiser-Stedman, et al., 2006; Schreier, Ladakakos, Morabito, Chapman, & Knudson, 2005; Zatzick et al., 2008) and the remaining had cross-sectional designs.

Conceptual Framework and Definition of the Family

Eight out of the 26 studies outlined using a conceptual framework and only one study gave an explicit definition of the family. Ozono and colleagues (2007) used a family systems framework, stating its importance for supporting family of childhood cancer survivors. Brown, Madan-Swain, and Lambert (2003) outlined the use of a family system framework nested in the social-ecological model (Bronfenbrenner, 1979). Frameworks for adaptation or adjustment to stress and trauma guided six studies (Alderfer, Navsaria, & Kazak, 2009; Barakat et al., 1997; Boyer, Hitelman, Knolls, & Kafkalas, 2003; Burton, Foy, Bwanausi, & Johnson, 1994; Greenberg & Keane, 2001; Harris & Zakowski, 2003). For example, Barakat and colleagues (1997) used models of PTS suggesting that responses are influenced by nature and severity of trauma, social support and coping resources, and child characteristics. One study explicitly defined family: Greenberg and Keane (2001) defined family as mother, father, siblings, aunts, and grandparents. Seven studies reported family living arrangement of the youth (see Table 1 for details) (Alderfer et al., 2009; Barakat et al., 1997; Boyer, Ware, et al., 2003; Burton et al., 1994; Dixon, Howie, & Starling, 2005; Halloran, Ross, & Carey, 2002; Linning & Kearney, 2004). Although not equivalent to the definition of family, except when referring to those related to household boundaries, statistics on family living arrangements gave context to the data.

Empirical Relationships between Family Phenomena and Youth PTS

Five studies found that elements of family functioning and family environment correlated with PTS in youth (r strength=.22-.64; directionality of relationship depended on phenomena measured; trauma exposure included spinal cord injury, violence, trauma, and SCUD missile attack) (Boyer, Hitelman, et al., 2003; Boyer, Ware, et al., 2003; Burton et al., 1994; Laor et al., 2001; Overstreet et al., 1999). Khamis (2005) found significant differences between Palestinian youth with PTSD and those without PTSD in the family environment (t (998) = -3.94, $p < .0001$) and parental style of influence (t (998) = -2.76, $p < .006$). Here, youth with PTSD had more reports of anxiety in the home environment and harsher discipline. In addition, for physically or sexually maltreated youth, those with PTSD had scores on family cohesion far below normative values; independence was also below normative values in PTSD and non-PTSD groups (Linning & Kearney, 2004). Ozono and colleagues (2007) found that youth cancer survivors with severe symptoms of PTS reported lower levels of family functioning with respect to roles and affective responsiveness than youth with less severe PTS ($p < .05$). Pelcovitz and colleagues (1998) found that youth with history of cancer and PTSD saw their families as significantly more chaotic than those without PTSD. In a sample of cancer survivors, Alderfer and colleagues (2009) found that youth with PTSD had families with poorer problem-solving, affective response, and affective involvement ($p < .05$). Also, 75% of the youth with PTSD had poorly functioning families and were five times as likely to come from families with poor functioning.

Investigators in five other studies, however, found that the bivariate relationships of family functioning, family environment, and family support with PTS were not significant (pediatric cancer, trauma, parental cancer, earthquake, media exposure to 9/11, and rocket attacks) (Brown et al., 2003; Dixon et al., 2005; Harris & Zakowski, 2003; Kasler, Dahan, & Elias, 2008; Kiliç, Özgüven, & Sayil, 2003). Additionally, in a sample of cancer survivors, Kazak and colleagues (1997) found significant correlations for youth PTS and mother's family satisfaction ($r = -.24$); but mother's report of general family functioning or communication and father's report of general family functioning, communication, or satisfaction were not significant. Otto and colleagues (2007) also found in regards to media exposure to 9/11, family conflict and cohesiveness were not associated with PTS, but family expressiveness was associated with lower PTS ($p < .05$).

In seven studies using regression analyses, family phenomena did not contribute to the variance in youth PTS (traumas including pediatric cancer, cardiac surgery, trauma, earthquake, and sexual victimization) (Barakat et al., 1997; Brown et al., 2003; Connolly, McClowry, Hayman, Mahony, & Artman, 2004; Dixon et al., 2005; Kiliç et al., 2003; Koverola, Proulx, Battle, & Hanna, 1996; Ozono et al., 2007). Overstreet and colleagues (1999) found that family support did not moderate the effects of community violence exposure on PTS. These studies using regression analyses indicated that while controlling for other variables, family phenomena were not consistently associated with youth PTS.

Two other studies found in regressions, however, that family environment and functioning contributed to the variance in youth PTS (Burton et al., 1994; Khamis, 2005). Halloran and colleagues (2002) also found in their sample of psychiatric in-patient youth, for females only, a structured family was associated with increased odds of PTS (odds ratio 3.21): behaviors associated with family structure (control, achievement, morality, and organization) may help males to be successful, but have a detrimental effect for females when dealing with a trauma.

The majority of prospective studies indicated significant relationship between family phenomena and youth PTS. Greenberg and Keane (2001) found that youth satisfaction with family support measured at baseline contributed to later PTS in youth exposed to a home fire. Max and colleagues (1998) also found that pre-injury level of family functioning predicted PTS symptoms in youth with traumatic brain injury. Laor and colleagues (2001) found that in youth exposed to a SCUD missile attack, family functioning at 30 months correlated with PTS at 5 years in residentially displaced children; the relationship did not hold true for residentially stable children. Two studies had prospective designs but analyzed relationships between family phenomena and youth PTS cross-sectionally (Schreier et al., 2005; Meiser-Stedman, et al., 2006). Schreier and colleagues (2005) found that youth exposed to mild to moderate trauma (excluding physical and sexual abuse, head injuries, and burns) rating their family as high achievement orientated also tended to have higher symptoms of PTS ($r = .26-.52$); increased expressiveness in families potentially mitigated the effects of PTS ($r = -.24- -.28$). Meiser-Stedman and colleagues (2006) found irritable distress and maternal overprotection correlated with PTS symptoms ($r = .38-.44$). Alternatively, Zatzick and colleagues (2008), found that PTS (as an independent variable) was not associated longitudinally with family cohesion (as a dependent variable) in youth cancer survivors.

Data Analysis

Nine studies used multiple participants for data reporting, including the youth incurring the trauma, as well as mothers, fathers, and siblings (Alderfer et al., 2009; Barakat et al., 1997; Boyer, Hitelman, et al., 2003; Boyer, Ware, et al., 2003; Brown et al., 2003; Harris & Zakowski, 2003; Kazak et al., 1997; Kiliç et al., 2003; Ozono et al., 2007). Six studies used only one member of the family in reporting some data, even though the sample had multiple family members available (Khamis, 2005; Laor et al., 2001; Meiser-Stedman et al., 2006; Otto et al., 2007; Pelcovitz et al., 1998; Schreier et al., 2005). One study was not entirely clear about who reported on the family phenomena measure (Connolly et al., 2004). All other studies had only the youth with the reference trauma in the sample, and thus had only single reporting.

Four studies with reports from multiple family members did not account for intra-familial correlation in data analysis (Barakat et al., 1997; Brown et al., 2003; Harris & Zakowski, 2003; Kazak et al., 1997). Others addressed multiple family members' reporting in analysis. Two studies, both reporting on the same sample, computed the average scores of family functioning for mothers, fathers, and youth for analysis (Boyer, Hitelman, et al., 2003;

Boyer, Ware, et al., 2003). Alderfer and colleagues (2009) also used average scores across family members. Other methods include paired analyses (for couples) and intercorrelations among family members (Kiliç et al., 2003; Ozono et al., 2007). One study by Otto and colleagues (2007) had multiple siblings related to one mother, but only had the mother report on family support. They used generalized equation modeling, stating that multiple siblings from one family could not be considered independently sampled (Rosenbaum et al., 1991; 2000).

International Context and Cultural Considerations

International context and culture emerged as necessary considerations when examining the role of family phenomena. For example, Khamis (2005) created a set of instruments specifically for a sample of Palestinian youth called the Family Ambiance Scale (FAS), the Child Psychological Maltreatment Scale (CPM), and the Harsh Discipline Scale (HDS). These instruments, developed for the cultural nuances in the sample of Palestinian youth, point towards the need for cultural considerations. The FAS had two factors separating apprehension and fear of communicating with the father, from apprehension and fear of communicating with the mother and siblings. The CPM was designed specifically to assess “repeated patterns of parental behavior that conveyed to children that they were worthless, flawed, unloved, unwanted, endangered or only of value in meeting another’s needs in the context of the Palestinian culture” (Khamis, 2000, p.85). Additionally, the HDS used phrases such as obedience and coercive punishment that may not translate across cultures. Kiliç and colleagues (2003) noted the validity and reliability of the Turkish version of the FAD, and spoke to the vulnerability of their sample that experienced two high magnitude earthquakes in a short period of time. With youth exposed to a SCUD missile attack in Israel, Laor and colleagues (2001) drew their sample from families living in the same neighborhood. Kasler and colleagues (2008) compared youth living in two different towns in Israel: one affected by rocket attacks and one that was not. Ozono and colleagues (2007) also noted the reliability and validity of their translated version of different measures.

Discussion

Key Findings

This review indicates that studies have examined a vast array of family phenomena in relation to youth PTS. Few studies clearly delineate a conceptual definition of the family phenomena of interest. The empirical research findings in the 26 studies relative to the relationship between family phenomena and PTS in youth are mixed. Some studies found that family phenomena is associated with youth PTS when correlations or comparisons between high and low PTS are analyzed. The regression analyses, however, often did not support the predictive relationship between family phenomena and PTS in youth exposed to varied traumas (e.g. pediatric cancer, cardiac surgery, and violence). The prospective studies in this review, however, favored significant relationships between family phenomena and youth PTS. Prospective studies provide an important methodology by which to examine these critical variables of interest and give a clear direction for psychiatric nurses.

PTS is not a culture-bound phenomenon (Ruchkin et al., 2005). The cultural and international variation in the studies analyzed in this review is important. In this sample, trauma exposure in different geographic populations varies. The trauma and stress of a chronic illness can occur in any country, but the likelihood of earthquakes and political violence is more prevalent in some regions than others. The global perspective of this analysis indicates that PTS is not solely linked with one type of trauma, nor is the role of family phenomena in PTS across geographic regions and culture fully understood. International context and culture influence family and must be considered when evaluating

family phenomena and youth PTS. Beliefs about trauma are often shaped by cultural meaning (e.g. religious conflict; natural disasters; severe childhood illness). The normative (i.e. healthy response to a bad event) and pathological adjustment (i.e. prolonged and severe avoidance, intrusive, and hyper-arousal symptoms) associated with PTS occurs across cultures and populations (APA, 2000; Foa, 1997; Horowitz, 1986; Kassam-Adams, 2006).

Limitations

This review examined all types of traumas, so the overall findings may be limited. No one type of trauma exposure (e.g. injury or cancer survivorship), however, indicated that family phenomena consistently related to youth PTS. Given that youth experience many different types of traumas, this review sought to give a broad perspective of the literature. In doing so, the age range of the youth in the studies was wide (5–24) but reflects the diversity of the literature on youth PTS. Likewise, the 26 studies focused on many different family phenomena. This speaks to the breadth of the literature on family science, though comparison across studies may have limitations. Even though the focus of this review was wide, a general understanding of the literature in the context psychiatric nursing provides important direction for future research and eventual translation to practice.

A limitation in sample of these 26 studies included small sample sizes and lack of variation in key variables in some studies. Seventeen studies had less than 100 youth in the specified reference trauma. Even though studies employed different statistical analyses strategies to determine results, there is potential lack of statistical power to detect effect sizes associated with family phenomena with small sample sizes; some studies mentioned this in their own limitations (e.g. Meiser-Stedman et al., 2006; Ozono et al., 2007). The homogeneity in reporting of key variables by participants in given samples also presents a limitation. Dixon and colleagues (2005) looked at female juvenile defenders and found that most of the sample had poor family functioning. In contrast, Connolly and colleagues (2004) found that most of the families with a child undergoing cardiac surgery reported high levels of cohesiveness in the family. Both studies attributed their lack of statistical significance in their findings to the homogeneity in the sample for these variables. These disparate examples both share the common feature of how little variation in a key variable can impact analyses.

Another major limitation in the sample of studies is that of study design and data analysis. Lack of conceptualization of these various family phenomena in some studies prior to operationalization makes it difficult to compare studies across youth PTS. Most study designs were cross-sectional. With cross-sectional data, temporal sequence of events is unclear and the cyclical nature of family phenomena and mental health may not be well elucidated. Given that changes in family functioning are difficult to discern over time (Kazak et al., 1999), longitudinal studies that assess PTS changes over time can be very informative, as they can take into account directionality of relationships while the role of the family potentially remains constant. There is also a potential developmental component to the emergence of PTS symptoms, as older youth may have a stronger association with PTS than younger (Hobbie et al., 2000). Given that symptoms of PTS can change over time, repeated measures may be effective. There are challenges with prospective study designs with multiple data collections points, yet further investigating PTS in youth longitudinally is critical.

Even though multiple family members were surveyed in some studies, not all accounted for intra-familial correlation in analyses. Indeed, there are longstanding challenges associated with family data (Fischer, Kokes, Ransom, Phillips, & Rudd, 1985; Uphold & Strickland, 1989). When family phenomena data are available from multiple family members, however, it is crucial to address intra-familial correlations because data from multiple family members

are not independent (Kashy & Snyder, 1995; Knafl et al., 2009). Studies should outline a justification as to why or why not interfamilial correlation was taken into account.

Gaps in Knowledge and Recommendations

Psychiatric nurses can play major role in not only conducting research sensitive to the issues raised in this critical review, but also as clinical partners in the design and conduct of research. A clear gap in the knowledge is the conceptualization of family phenomena in relation to youth PTS. The lack of definitions associated with family phenomena likely contributes to the inconsistent relationships between family phenomena and youth PTS, and could be important in attenuating risk and development of PTS. Yet, this is a clear area where psychiatric nurses can provide strong direction. Psychiatric nurses must have a clear and appropriate conceptualization of their phenomena of interest in their research and a strong conceptual linkage to measurement. If family phenomenon is not clearly delineated, measures employed may not be capturing the intended phenomenon of interest. For example, if investigators believe that the family makes a difference due not only to cohesion but the overall environment, selection of family measure may include the FES instead of a measure that describes more intrafamily processes.

Psychiatric nurses' knowledge of risk and protective factors that may contribute to the development of youth PTS within the context of the family can also make valuable contributions to future studies. The role of peers, school, and community in relationship to family phenomena may help to better describe the development of PTS in youth. Examining these factors in community dwelling youth may help to increase heterogeneity and generalizability of study findings. Future quantitative studies need to continue to use reliable and valid instruments to assess the role of the family with attention to sample size to ensure adequate power, and study design and analytical strategies to answer questions of interest. Intra-familial correlation needs to be taken into account when appropriate with multiple family respondents. Finally, qualitative studies may indicate further knowledge about the role of the family that may not be captured in a quantitative instrument. Psychiatric nurses can draw from the current state of the science of the role of the family and youth PTS to improve research and practice. Psychiatric nurses with both research and clinical agendas can make valuable contributions to all of these areas of concern.

The findings from these 26 studies add to knowledge of family phenomena and help to inform future directions for nursing science. Though most studies were not from the discipline of nursing, the findings are relevant to psychiatric nursing research and practice. Caring for youth in the context of the family is part of psychiatric nursing practice. The findings can inform not only future descriptive research, but interventions and practice which aim to improve the health and well-being of youth and families. For example, on the family level, cultural meaning/beliefs about trauma and transmission within the family system require examination. In the area of medical trauma specifically related to cancer, the Family Illness Beliefs Inventory (FIBI) constructed by Kazak and colleagues can be used to identify beliefs about childhood cancer that can then potentially be reframed with family systems cognitive behavioral approaches in order to prevent and treat PTS (Kazak et al., 2004; 2005; Stehl et al., 2009).

Future studies that examine youth with cancer, spinal cord injury, or other chronic illnesses, PTS, and family phenomena could benefit from the use of instruments that are specific to the management of chronic illness by the family, such as the Family Management Measure (FaMM) (Knafl et al., In Press). The FaMM has not been used in the context of youth PTS and family phenomena, but has potential to add to the science. Data from the FaMM contributes to the ability to understand more fully family functioning in the context of childhood chronic conditions, rather than trying to examine family functioning without the

context of the illness. With the FaMM, measuring how the family manages the chronic illness in relation to family functioning and youth PTS may illuminate potentially important findings that are useful in nursing research and practice. By gathering knowledge about areas of family management that may specifically relate to PTS, nursing science can target both research and practice to improve mental health outcomes in youth.

Conclusions

Youth response to trauma such as political violence, injury, or life-threatening illness is important to nursing research and practice related to the mental health and well-being of youth. The role of the family is an important facet to physical and psychosocial growth and development for infants, children, and adolescents. At this point in the literature, there are inconsistent findings related to the role of family phenomena and PTS in youth, though prospective studies favor relationships between family phenomena and youth PTS exist. Discrepancies point towards an imperative focus in research to further understand the relationship of these factors. How youth respond to trauma and stress can have a large impact on long term psychosocial outcomes. Psychiatric nurses are well-positioned to foster healthy outcomes in young people faced with trauma and stress. Psychiatric nurses are actively engaged in caring for youth in the context of the whole family, and research and interventions need to continue to look further into the role of the family in PTS. Given that youth exist with the context of the family, understanding and providing support for the role of the family is also a necessity when examining potential areas for research and practice. Family is an important part of the holistic care of youth for psychiatric nurses. Targeted, effective interventions involving family and youth PTS should be addressed through careful research and practice.

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Table 1

Description of Studies

Authors	Sample Description	Type of Trauma	Family Phenomena Variables and Measure	Relevant Findings
Aldefer et al., 2009 US	<i>Cancer Survivors:</i> Families N=150; Survivors N=144 (53% female, 11–19 years, M=14.6); Mothers N=144; Fathers N=104, N=98 for complete data on two-parent families; N=25 for complete data on single-parent families. 86% Caucasian	Childhood Cancer	Family functioning Parent and Youth: FAD-All subscales used (problem solving, communication, roles, affective responsiveness, affective involvement, behavioral control, and general functioning) An average of the scores of the youth, mother, and father was computed	Cancer survivors with PTSD (8% of the sample) had poorer functioning (problem solving, affective responsiveness, and affective involvement) than those without PTSD. Three-fourths of the youth with PTSD came from families with poor family functioning. Adolescents with PTSD were more than 5 times as likely to originate from families with poor family functioning.
Barakat et al., 1997 US	<i>Cancer Survivors:</i> Families N=309; Survivors N=309 (50% female, 8–20 years, M=13.5); Mothers N=309 (M=41.7); Fathers N=213 (M=43.8) 85% two parent families; 87% White <i>Comparison Group:</i> Families N=219; Children N=219 (56% male, 8–20, M=12.3); Mothers N=211 (M=42.2); Fathers N=114 (M=44.4) 77% two parent families; 60% White	Childhood Cancer	Family functioning Parents only completed FACES IIIA (Adaptability, Cohesion & Satisfaction) Did not account for intra-familial correlation	There were no significant differences between survivor and comparison children PTS. Family functioning did not make a significant independent contribution to the variance of PTS.
Boyer, Hietelman, et al., 2003 US	<i>Pediatric Spinal Cord Injury patients:</i> N=64 (41% female, 11–24 years M=17.5) 92% Caucasian, 4% African American, 2.7% Hispanic <i>Mothers and fathers</i> (no info)	Pediatric Spinal Cord Injury	Family functioning Parent and Youth: FAD General functioning was used. An average of the scores of the youth, mother, and father was computed	Family functioning correlated with child PTS. Child PTS was not a moderator for family functioning and functional independence. Child PTS was a mediator for family functioning and functional independence
Boyer, Ware, et al., 2003 US	<i>Pediatric Spinal Cord Injury patients:</i> N=29 (56% female, 12–24, M=18.4) 88% Caucasian, 3% African American, 9% Hispanic or other; 59% lived with 2-parent families <i>Mothers:</i> N=26 (27–63, M=42.9) 100% Caucasian <i>Fathers:</i> N=27 (24–55, M=38.2) 96% Caucasian, 4% Hispanic	Pediatric Spinal Cord Injury	Family functioning Parent and Youth: FAD An average of the youth, mother, and father was computed	Family functioning showed a moderate correlation to child PTS, but did not achieve significance with a Bonferroni Correction.
Brown et al., 2003	<i>Cancer Survivors:</i> Child-mother dyads N=52. Children (52% female, ages 12–23, M=17) 75% Caucasian 21% African American, 2% Hispanic, 2% Korean 69% two-parent families <i>Comparison Group:</i> 42 child-mother dyads (58% Female, ages 12–23, M=16.7) 86% Caucasian, 12% African American 76% two-parent families No demographics for mothers	Childhood Cancer	Family functioning, life events related to family, and family support Youth: A-FILE, Perceived Social Support-Family, and FES Mother: FILE, FES For the FES, only the Supportive and Conflicted factors were used in analyses Did not account for intra-familial correlation	Survivors had higher scores of PTS than comparison-although not within the clinical range for PTSD diagnosis. Survivors also reported more stressful life events (A-FILE) than comparisons. There was no difference in frequency of levels of PTSD in survivors and comparison groups. PTS in survivors was not related to FES (either scale) or Perceived Social Support-Family. FES (conflict scale included on theoretical grounds) did not significantly contribute to the variance of PTS in survivors.

Authors	Sample Description	Type of Trauma	Family Phenomena Variables and Measure	Relevant Findings
US				
Burton et al., 1994 US	<i>Juvenile Offenders</i> : N=91, (100% male, ages 13–18, M=16) 40% Black, 40% Hispanic, 10% Caucasian, 7% Asian, and 3% other 33% two-parent families 33% from 2-parent families	Violence: direct experience to deliberate violence or natural or accidental disasters which presented a serious threat	Family functioning FRI (Cohesion, Conflict and Expressiveness Subscales)	Family expressiveness, conflict and overall functioning correlated with PTSD. Overall functioning contributed to the variance of PTSD.
Connolly et al., 2004 US	<i>Youth undergoing Cardiac Surgery</i> : N=43 (40% female, ages 5–12 M=8.2) 47% Caucasian, 16% Latino, 14% Asian, 9% African American, and 14% Other. <i>Other Respondents</i> : Mothers N=28, mothers and fathers N=10, legal guardians N=3, and fathers N=2	Pediatric Cardiac Surgery	Family support and functioning Family Apgar (adaptability, partnership, growth, affection, and resolve) (Smilkstein, 1978) Not explicit who completed the measure.	Dimensions of family support were not predictive of PTSD.
Dixon et al., 2005 Australia	<i>Female Juvenile Defendants</i> : N=100 (100% female, 13.5–19, M=16.5) 48% Aboriginal, 33% White, Polynesian/Maori 12%, Asian 6%, and African American 1% 1/3 lived away from home prior to incarceration	Trauma (e.g. car accident, fire, disaster, victimization, witnessing violence, sexual abuse)	Family functioning FACES II (Overall family type, Cohesion, and Adaptability)	No differences in family functioning between offenders with and without PTSD. Family functioning did not contribute to the variance in PTSD.
Greenberg & Keane, 2001 US	<i>Youth in a home fire</i> : N=56 at two time points (5 and 9 months) (54% female, ages 6–17) 80% African American	Home Fire	Family relationships and support FRI (Cohesion, Conflict, & Expressiveness) SSRS-R-Family was defined as mothers, fathers, siblings, aunts, uncles and grandparents	Lack of satisfaction with support contributed to variance of PTSD at 5 months and 9 months.
Halloran et al., 2002 US	<i>Youth admitted to a Psychiatric Inpatient Unit</i> : N=170 (56% female, M=14.9) ~88% Caucasian 53% male and 34% females lived in 2-parent households	Does not specify	Family environment FES (Relationship, Personal Growth, and System Maintenance)	For girls only: A structured family was associated with an increased odds ratio of being diagnosed with PTSD.
Harris & Zakowski, 2003 US	<i>Youth with Parents with Cancer</i> : N=27 (67% female) 89% Caucasian <i>Comparison group</i> : N=23 (48% female) 91% Caucasian <i>Overall</i> (ages 12–19, M=15.7) <i>Parents with Cancer</i> : N=22 (82% female) 91% Caucasian <i>Healthy Parents</i> : N=19 (79% female) 95% Caucasian	Parent's cancer	Family environment and expression of emotion within the family The youth only completed the FRI (Cohesion, Conflict and Expressiveness). More than one child per household was allowed to participate. Did not account for intra-familial correlation (among siblings)	No significant correlations between family environment and PTS symptoms. Adolescents with healthy parents had higher PTS symptoms (avoidance and intrusion) than children with parents with cancer.
Kasler et al., 2008 Israel	<i>Youth in Israel directly affected by rocket attacks</i> : N=152 <i>Youth in Israel NOT directly affected by rocket attacks</i> : N=179. <i>Overall</i> : (51% female, 11% did not disclose gender, ages 9–11) 89% Israeli born	Rocket attack in Israel	Family support MSPSS (only questions on family support were completed).	No significant correlations between family support and PTSD.
Kazak et al., 1997 US	<i>Leukemia Survivor Group</i> : Survivors: N=130 (49% female, 8–19, M=13.5) 90% White, 1% Black, 5% Hispanic, 4% Asian	Childhood Leukemia	Family functioning, communication and satisfaction	No difference in survivors and comparison group for PTS.

Authors	Sample Description	Type of Trauma	Family Phenomena Variables and Measure	Relevant Findings
	Mothers: N=130 (M=41.5) Fathers: N=96 (M=44.1) <i>Comparison Group:</i> N=155 (54% female, 8–20, M=12.3) 67% White, 15% Black, 12% Hispanic, 5% Asian, and 1% Other Mothers: N=148 (M=42.1) Fathers: N=80 (M=43.8)		Parents only: FACES IIIA (General family functioning, Communication, and Satisfaction) Did not account for intra-familial correlation (among parents)	Mother family satisfaction negatively correlated with survivor children PTS. No correlations for survivor mother family functioning and communication or father family functioning, satisfaction, or communication and child PTS. No correlation for comparison mother or father family variables and child's PTS.
Khamis, 2005 Israel (Palestine)	<i>Palestinian Youth:</i> N=1000 (48% female, 12–16, M=14.2) 85% from West Bank, 15% from East Jerusalem; 86% Muslim, 14% Christian Mothers: N=664 Fathers: N=338	Violence (e.g. physical abuse in family and political violence)	Family environment and parental style of influence Youth: FAS (Youth's experience of anxiety in proximal home environment) PSS (Degree of satisfaction with parental support) HDS (Youth's perceptions of parental rearing practices) CPM (Measure repeated patterns of parental behavior)	Comparison of PTSD children to non-PTSD children: Children who exhibited PTSD symptoms were more likely to report higher levels of anxiety in the home environment, psychological maltreatment, and harsh discipline. Anxiety in the home environment was a predictor of PTSD.
Kiliç et al., 2003 Turkey	<i>Youth:</i> N=49 (47% female, 7–14, M=10) Mothers: N=35 (M=34.9) Fathers: N=30 (M=36.5) 22 Families had 1 child, 12 families had 2 children, and 1 family had 3 children in the sample.	Earthquake	Family functioning Parents filled out the FAD (Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, Behavior Control, and General Family Functioning) Paired analyses were used to compare couples	PTSD scores of children did not correlate with family functioning report by mother or father. Family functioning report by mother or father did not predict PTSD in children.
Koverola et al., 1996 Canada	<i>Victimized in childhood by and adult or older person (CSA):</i> N=83 <i>Victimized in childhood by a peer (PSA):</i> N=76 <i>Victimized in childhood and revictimized as adult (REV):</i> N=44 <i>No victimization (NONAB):</i> N=378 <i>Overall:</i> 100% female, 17–24, M=19, 78% Caucasian, 12% Asian, 1% Native, and 7% Unspecified	Sexual victimization	Family functioning FES (Cohesion, Expressiveness, Conflict, Independence, Organization, and Control)	CSA and REV groups had higher distress scores than NONAB CSA, PSA, and REV had lower cohesion and higher conflict than NONAB; CSA had higher control than NONAB. Three victimization groups were collapsed. None of the subscales of the FES predicted PTSD in the abused or nonabused groups.
Laor et al., 2001 Israel	<i>Youth exposed to SCUD:</i> N=81 (70% female, 8–10) Mothers: N=41 Assessed at 6 months, 30 months, and 5 years	SCUD Missile Attack	Family functioning Mother completed the FACES III (Cohesion and Adaptability) at the 30 month assessment	Family functioning (cohesion and adaptability) at 30 months correlated with stress reactions in displaced children at 5 years. No relationship for residentially stable children. Family functioning at 30 months did not contribute to child PTSD at 5 years.
Linning & Keamey, 2004 US	<i>Maltreated youth:</i> N=55 (58% female, 8–17, M=12.7), 33% White, 33% African American, 20% Multiracial, and 14% Hispanic American 60% came from single parent homes	Trauma (in a sample of maltreated youth)	Family environment FES (Cohesion, Conflict, and Independence)	Sample divided into PTSD (N=37) and non-PTSD (N=18). Means for the FES subscales were not different between the non-PTSD and PTSD groups. Cohesion (just PTSD group) and independence (both) far below normative values and conflict (both) far above normative values.

Authors	Sample Description	Type of Trauma	Family Phenomena Variables and Measure	Relevant Findings
Max et al., 1998 US	<i>Youth with Traumatic Brain Injury</i> : N=50 at baseline, N=49 at 3 months, N=38 at 6 months, N=42 at 12 months, and N=44 at 24 months. Comprehensive analysis based on N=43 <i>Overall</i> : (36% female, 6–14, M=10.3) 98% White.	Traumatic Brain Injury	Pre-injury family functioning McMaster Structured Interview of Family Functioning (7 domains including family functioning) (Miller et al., 1994)	Incidence of PTSD in cohort was rare. Pre-injury family functioning predicted 3-month PTSD symptoms. Approached significance at 12 and 24 months ($p<.06$)
Meiser-Stedman et al., 2006 United Kingdom	<i>Survivors of MVAs or assaults (sexual assault excluded)</i> : N=66 (40% female, 10–16, M=13.8) <i>Mothers</i> : N=64, <i>Fathers</i> : N=1, <i>Adult Sibling</i> : N=1 N= 66 families for at Time 1 and 46 children and 36 parents at Time 2	MVAs or assaults-including sexual assault	Family functioning Parent/adult sibling: FFQ (Irritable distress, Involvement, and Maternal Overprotection)	At Time 2, irritable distress and maternal overprotection correlated with PTS symptoms.
Otto et al., 2007 US	<i>Youth</i> : N=166 (53% Female, 7–15, M=11) 92% Caucasian, 4% African American, 1% Hispanic, 3% Asian <i>Mothers</i> : N=84	Media exposure to 9/11	Family support/family functioning Mother: Expressed emotion of mother with FMSS-EE, and FES (conflict, cohesiveness, and emotional expressiveness) measured pre-event. Accounted for intra-familial relationships-used generalized estimating equation methods because of siblings in sample	Pre-event level of parental criticism or over-involvement not associated with PTSD symptoms in the child. Family conflict and cohesiveness not related to PTSD in the child. Family expressiveness was associated with lower PTS risk and symptoms.
Overstreet et al., 1999 US	<i>Youth</i> : N=75 (54% female, 10–15, M=12.5) 100% African American	Community violence exposure	Family support Measured as mother's presence in the home and family size	Mother's presence in the home and family size each correlated with PTS. Availability of family support did not moderate effects of community violence exposure on PTSD symptoms.
Ozono et al., 2007 Japan	<i>Pediatric cancer survivors</i> : N=88 (55% female, 12–20, M=16.2) 100% Japanese <i>Mothers</i> : N=87 <i>Fathers</i> : N=72	Pediatric Cancer	Family functioning All members: FAD (Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, Behavior Control, and General Functioning) Intercorrelations among family members done.	PTS correlated with Roles and Affective responsiveness subscales for survivors. Family functioning not a significant predictor for PTS in survivors.
Pelcovitz et al., 1998 US	<i>Cancer Survivors</i> : N=23 (52% female, IQR 15–19, M=17.6) 74% Caucasian, 18% African American, 4% Hispanic, 4% Asian <i>Physically Abused</i> : N=27 (59% female, IQR 14–16, M=15.1) 100% Caucasian <i>Comparison Group-no history of chronic illness</i> : N=23 (52% female, IQR 15–17, M=16.1) 100% Caucasian <i>Mothers of the pediatric cancer survivors also used</i>	Pediatric Cancer and physical abuse	Family functioning and parental bonding Youth: PBI (Care and Protection); FACES III (Cohesiveness and Flexibility)	More cancer survivors met criteria for lifetime PTSD than abused group. No differences among groups for current PTSD. When comparing adolescents with a history of cancer who met criteria for lifetime PTSD to adolescents who did not, adolescents with PTSD saw their families as more chaotic.
Schreier et al., 2005 US	<i>Pediatric trauma patients</i> : N=83 at baseline (26% female, 7–17, M=10.6) 47% White, 31% African	Physical trauma (excluded physical or sexual abuse, burns, or those with a severe head injury)	Family environment Parents: FES Form-R (Social environment of families)	Families rated as highly expressive had lower PTSD symptom severity than children in families rated low in expressiveness. Families

Authors	Sample Description	Type of Trauma	Family Phenomena Variables and Measure	Relevant Findings
	American, 13% Hispanic, 6% Asian/Pacific Islander, 1% Native American and 1% Other N=68 at 1 month N=66 at 6 months N=45 at 18 months Parents: N not specified			rated as high achievement orientation also tended to have higher PTSD symptoms.
Zatzick et al., 2008 US	<i>Pediatric trauma patients</i> : N=108 at baseline (33% female, 12–18, M=15.9) 73% White N=94 at 2 month N=90 at 5 month N=89 at 12 month	Trauma patients (excluded head or spinal cord injuries that limited verbal exchanges and self-inflicted injuries)	Family Cohesion 87-item Child Health Questionnaire (had a Family Cohesion subscale) (Landgraf, Abetz, & Ware, 1996)	PTSD scores (independent variable) not longitudinally associated with family cohesion (dependent variable).

Adolescent Family Inventory of Life Events and Changes (A-FILE) (McCubbin, Patterson, Bauman, & Harris, 1996)

Child Psychological Maltreatment (CPM) (Khamis, 2005)

Family Adaptability and Cohesion Evaluation Scale-Version II, III, IIIA (FACES II, III, IIIA) (FACES IIIA cited as a personal communication in Barakat et al. (1997) and Kazak et al. (1997); Olson et al., 1982; Olson, 1986)

Family Assessment Device (FAD) (Epstein et al., 1983)

Family Ambiance Scale (FAS) (Khamis, 2005)

Family Environment Scale (FES) (Moos & Moos, 1986)

Family Functioning Questionnaire (FFQ) (McFarlane, 1987)

Family Inventory of Life Events and Changes (FILE) (McCubbin, Patterson, & Wilson, 1996)

Family Life Scale (FLS) (Fisher et al., 1993)

Family Relationship Index (FRI) (Shortened form of the FES)

Five Minute Speech Sample Measure of Expressed Emotion (FMSS-EE) (Magana et al., 1986).

Harsh Discipline Scale (HDS) (Khamis, 2005)

Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Powell, Farley, Werkman, & Berkoff, 1990)

Parental Bonding Instrument (PBI) (Parker, 1983)

Parental Support Scale (PSS) (Khamis, 2005)

Social Support Rating Scale-Revised (SSRS-R) (Cauce, Placek, Mason, and Smith (1990)