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The Children of Military Service Members: Challenges, Supports, and Future Educational Research

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The wars in Afghanistan and Iraq have led to concerning psychological, behavioral, and academic outcomes for children in military families. Of the 1.2 million school-aged children of military service members, only 86,000 actually attend schools administered by the Department of Defense on military installations throughout the world. The remaining military children attend schools administered by civilian public schools, private schools, and other civilian-run educational agencies. At present, there is a knowledge gap in educational research regarding military-connected schools and students. Given the lack of educational research on military children, the primary objective of this review is to outline findings from noneducational disciplinary empirical literatures that are of direct relevance to schooling for educational researchers who want to conduct studies on military-connected schools and students. The authors reviewed studies on military children and their families that examined links between special circumstances and stressors as well as outcomes that are known to impact students' school experiences. A synthesis of literature generated six themes: mental health in military families, child maltreatment, the impact of deployment on military children and families, the reintegration experience, war-related trauma of the returning veteran parent, and the experience of Reservist and Guard families in civilian contexts. The article concludes with a heuristic model for future educational research, including linkages to school reform.

KEYWORDS: Military children, school reform, school climate, culturally responsive schools, mental health.

Since 2001, approximately 2 million children have experienced a parental deployment. At present, there are 1.2 million school-aged children of active duty military service members (PreK–12) and an additional 625,000 children of National Guard and 705,000 children of Reserve members (*Military K-12 partners*, n.d.). Only a small number (about 86,000) of these students are educated in schools operated by the Department of Defense Educational Activity (DoDEA). The DoDEA is a separate federal education governance structure that oversees schools on U.S. military bases, primarily located on the East Coast of the United States and in 130 international locations. Most military children attend civilian public schools in the United States. Approximately 80% of these children are concentrated in 214 public school districts, known as military-connected school districts. These districts have or have had an average daily attendance (ADA) of more than 400 military students or an ADA that included 10% or more military students. In addition, these districts have been eligible for and/or have applied for Federal Impact Aid dollars set aside for schools with significant military student populations. The needs and experiences of this sizable group of students in public schools are largely absent and unaddressed in the education scholarly literature. In this review, we initiate the process of addressing this knowledge gap in educational research (for recent reports on military-connected schools, please see Kitmitto et al., 2011; U.S. Department of Defense, 2011).

Background and context. Military children experience tremendous psychological strain as a result of stressful military-related life events (Angrist & Johnson, 2000; Gorman, Eide, & Hisle-Gorman, 2010; Mmari, Roche, Sudhinaraset, & Blum, 2009). These life events include parental deployment and reintegration, coping with a veteran parent's war-related trauma or illness, and the stress and anxiety of siblings and left-behind parents as they adjust to changing household dynamics. Research has found that resulting stress and mental health issues negatively influence the academic, social-emotional, and psychological outcomes of military children (Angrist & Johnson, 2000; Mmari et al., 2009). A recent study on military children and parental deployments, for example, found that during the 2005–2006 fiscal year the number of mental and behavioral health visits increased by 11%, behavioral disorders increased by 19%, and stress disorders increased by 18% in military children when a parent deployed (Gorman et al., 2010). In addition, Angrist and Johnson (2000) found a negative association between parental deployment and academic achievement, while recent qualitative studies in public health have found that military students across all age groups have academic functioning and behavioral issues as a result of deployment-related stress and anxiety (Chandra, Martin, Hawkins, & Richardson, 2010; Mmari et al., 2009).

Knowledge gap in educational research. How teachers and civilian school personnel adapt and how they support military students are crucial questions that need to be answered in order to respond to their unique circumstances. An examination of American Educational Research Association (AERA) program presentations over the past 10 years suggests that this topic has not been carefully explored

in these important educational research gatherings. There are also no known empirical studies in educational literatures directly addressing this challenge in school environments. However, some noneducational practitioner publications address how medical and social work professionals can help individual students cope with war (Huebner, Mancini, Bowen, & Orthner, 2009).

Given the lack of educational research on military children, our primary objective is to outline findings from noneducational disciplinary empirical literatures that are directly relevant to schooling for educational researchers who want to conduct studies on military-connected schools and students. We chose to review studies on military children and their families that examined links between special circumstances and stressors as well as outcomes that are known to impact students' school experiences. This review is to a large extent shaped and limited by the existing research literature. In the discussion section, based on the gaps in current research, we present a comprehensive heuristic model that could guide future educational research.

Four bodies of literature relevant to educational research. In this literature review, we focus on four bodies of literature. First, there is a robust research literature spanning many decades on the mental health status of military families. This empirical work focuses on the epidemiological prevalence of mental disorders within military families. Findings from mental health studies on military families and students are important for educational researchers because of the potential impact of poor mental health on school success, attendance, special education assessment, counseling services, and the organization of the school context. Second, the literature on child maltreatment in military families is both controversial and directly relevant to research on school reform efforts. Schools with large proportions of students referred to child protective services are often resistant to school improvement strategies (Kenny, 2001). Furthermore, given the large number of child maltreatment referrals made by schools, findings about military families are reviewed.

Third, we reviewed studies focusing on the specific impact of life events experienced by military families and children surrounding war. For example, students in military families may experience great social and emotional strain surrounding life events such as deployment, reintegration, or the combat-related physical or psychological trauma of a parent. Military children often experience stress from household demands such as increased responsibilities at home, poor mental health of left-behind nondeployed parents, and difficulty accessing mental health services (Chandra et al., 2010). These stressors potentially affect the academic and social functioning of military children in school. School reform efforts and research in areas with high concentrations of military families could also consider and plan for these stressors since they can affect school-related variables such as test scores, special services, attendance, school climate, and behavioral patterns. Last, we reviewed a large body of research on the experiences of National Guard and Reserves military families and available social supports.

Method

Data collection. To collect the peer-reviewed articles for this review, we utilized several electronic databases such as ERIC, PsycInfo, Google Scholar, JSTOR, and

Medline/Ovid. Search terms included *military children, military families, military connected schools, military impacted schools, deployment, reintegration, trauma and military children, war stress and military families, and war stress and military children*. We also conducted an Internet search to gather studies and published survey data from research organizations and military organizations (e.g., DoDEA, Pentagon) specializing in military families, military children, and/or schools. We ran further searches using referenced bibliographies of peer-reviewed articles on military children and families. Finally, we included published survey data open to the public from the DoDEA and the DoD/Pentagon. The article search yielded a total of 155 peer-reviewed articles.

Inclusion and exclusion criteria. The search process was limited by the following criteria. First, we included studies conducted with military families and children (0–18 years). Second, a deliberate effort was made to restrict the review to studies relevant to military children's academic functioning, behavioral issues, and social-emotional outcomes interesting to educational researchers. Third, non-peer-reviewed books, book chapters, unpublished dissertations, papers from policy institutes, clinical case studies, theoretical explications without data, practitioner-oriented publications, and master's theses were excluded. We included peer-reviewed studies, conceptual papers, and studies conducted and published by major research institutions (i.e., RAND, American Institutes for Research). The types of studies we included were descriptive, cross-sectional, quasi-experimental, and qualitative. Fourth, we included studies published since 1974, providing us with a 27-year time frame (1974–2011). This allowed us to include studies in the context of different historical and war contexts, including studies utilizing samples during the Vietnam War, Persian Gulf War, peacetime, and the current wars in Iraq and Afghanistan. Fifth, we included inquiries on military children residing in the United States as well as on overseas military bases. We applied the inclusion and exclusion criteria to each study. We included a final total of 82 peer-reviewed articles for review.

Data analysis. The thematic data analysis we conducted for this review occurred in three phases. During the first phase of data analysis, a team of two readers reviewed each article and generated conceptual categories. These conceptual categories included social experiences and outcomes (e.g., peer relationships, social skills), psychological issues (e.g., anxiety, depression), behavioral issues (e.g., aggression), academic functioning, supportive contexts (e.g., family), and psychological adjustment. We also identified differences in the outcomes and findings between military and nonmilitary samples. We generated preliminary tables in preparation for Phase 2 of data analysis, in which each article was subjected to a thematic analysis by a group of 10 researchers. Themes were discussed and analyzed first in small groups and then with the large group. Initial themes were generated as part of this process (family context, child maltreatment, mental health, deployment, school context, military supports, proposals for change, reintegration, and secondary trauma). As seen in Table 1, preliminary themes were then condensed into the following themes: child maltreatment, mental health, deployment, reintegration, war-related trauma of returning veterans, and the experiences of

National Guard and Reservist families. Cross-cutting subthemes related to study samples also emerged and included: military branch variation, historical variation, and war context variation. The third stage of data analysis consisted of crystallizing the main findings from the body of each theme, identifying inconsistencies and methodological/conceptual explanations for each theme, and suggesting possible solutions for a future research based on each finding or gap.

Results

The review process generated the following research themes: mental health, child maltreatment, impact of deployment on military children, reintegration, war-related trauma of the returning veteran parent, and Reservist and National Guard military family issues. Studies from the six overarching research themes are presented in Table 1.

Mental Health in Military Families

Research has found that mental health symptoms such as aggressive behavior and depression negatively affect academic functioning and outcomes among children and adolescents (Masten et al., 2005). A body of literature has examined mental health diagnoses and prevalence rates of military family members' (i.e., military parents, military spouses, and military children) risk factors. These studies span different war contexts (i.e., peacetime, Vietnam War, Iraq and Afghanistan wars), deployment situations, and geographic contexts. Overall, findings from these studies suggest that compared to earlier wars, mental health issues have become more prevalent within the current context of Iraq and Afghanistan.

Pre-Iraq and Afghanistan war contexts. In general, research has suggested in the pre-Iraq and Afghanistan war contexts that the mental health prevalence rate of military families was similar or lower to civilian families. An early case study of patients at a psychiatric clinic found that military family members had more mental health issues than civilian family members (Lagrone, 1978). Lagrone (1978) posited that a pathological illness specific to military families, the military family syndrome, caused the higher rates of mental health problems in military families. According to the military family syndrome theory, a military service member's dysfunctional relationship with the military bureaucracy is mirrored in his or her relationship with family members. In turn, military children develop maladaptive behaviors at higher rates than civilian children. This theory mechanism and assumptions were unsupported by follow-up studies (Jensen et al., 1995; Morrison, 1981). For example, when compared to their civilian counterparts, the follow-up studies conducted pre-Iraq and Afghanistan wars have found lower levels of psychopathology; a lower prevalence of schizophrenia, psychosocial dysfunction, and psychiatric disorders; and lower rates of psychiatric disorders among military children and more adaptive behaviors than civilian children (Jensen, Lewis, & Xenakis, 1986; Jensen et al., 1995). Furthermore, in a national study of psychopathological prevalence rates, Jensen, Xenakis, Wolf, and Bain (1991) found that military children have mental health symptoms at or below national norms. Consequently, rates may vary widely depending on where, when, and how military families experience war. Merely being in a military family does not seem

TABLE 1

Studies on military children relevant to educational research

Study	Participants	Research Design and Sampling	Findings
Mental health in military families			
Finkel, Kelley, and Ashby (2003)	Military 86 military mother and child dyads	Quantitative, observational, cross-sectional, survey, convenience	Greater family cohesiveness was significantly correlated with less aggressive, noncompliant behaviors among children. Child's loneliness, peer relationship quality, and self-esteem were predicted by family cohesiveness, and relationships with mothers, and length of time in residence. Mother's depressive symptoms significantly predicted children's depressive symptoms.
Gorman, Eide, and Hisle-Gorman (2010)	Military 642,397 children aged 3 to 8, 442,722 military parents	Quantitative, retrospective cohort, medical records	The incidence rate ratio (IRR) of children with a deployed parent compared to children with a parent at home was 1.11. The IRR of pediatric anxiety, behavioral, and stress disorders for children with a deployed parent compared with when a parent was at home were 1.14, 1.19, and 1.18, respectively.
Jensen, Lewis, and Xenakis (1986)	Military	Literature review	Indicators of psychosocial dysfunction were not as prevalent in military families when compared to civilian families (e.g., divorce). Military families had lower rates of psychiatric disorders, higher socioeconomic status, but increased alcoholism. Brief, temporary absences were associated with temporary behavioral/emotional symptoms in spouses and children.
Jensen et al. (1995)	Military, civilian 486 families with one or more children aged 6 to 17	Quantitative, cross-sectional, observational, survey, convenience	Prevalence rates of psychopathology in military and civilian families were similar (e.g., 17%–22%). Prevalence rates in this sample were similar to rates of psychopathology reported in epidemiological studies.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Jensen, Xenakis, Wolf, and Bain (1991)	Military 213 military children and their parents	Quantitative, cross-sectional, observational, survey, convenience	Mental health symptoms of children were comparable to national norms. Symptoms are predicted by military life stressors and symptoms of left-behind parent. Results did not show greatly increased levels of psychopathology in military children.
Morrison (1981)	Military, civilian 140 military and 234 civilian adolescent patients of mental health services	Quantitative, cross-sectional, observational, semi-structured questionnaire, convenience	The only significant diagnostic difference was that military dependents had a lesser prevalence of schizophrenia and schizophreniform psychosis. The only difference between the two groups was one aspect of family history. Alcoholism among fathers of military dependents was more prevalent.
Ryan-Wenger (2001)	Military, civilian 91 children (18 active duty children, 25 Reservist children, and 48 civilian children)	Quantitative, cross-sectional, comparative, structured interviews, convenience	No differences among the three groups for number of coping strategies used or effectiveness of coping were found. Active duty children used more destructive/aggressive coping mechanisms (e.g., fighting, yelling, screaming) than Reservist children, who were more likely to believe that relaxing was a more worthwhile coping mechanism than aggression. More active duty than civilian children expressed fear that parent would die in war.
Ursano, Holloway, Jones, Rodriguez, and Belenky (1989)	Military	Literature review	Psychiatric stressors that affect service members and their families are reviewed.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Weber and Weber (2005)	Military (Army, Navy, Air Force, Marines, National Guard) 159 military adolescents	Quantitative, cross-sectional, survey, convenience	Average number of relocations was 4.89. Children's behavior improved as they experienced more relocations, controlling for age. Relocation frequency predicted improved parental perceptions of relocations and decreased aberrant behavior of children.
Wickman, Greenberg, and Boren (2010)	Military 125 military adolescents of active duty or retired parents	Quantitative, cross-sectional, observational, survey, convenience	Frequency of risk behaviors among military adolescent children was lower than nationwide average. Teens who engaged in aggressive and delinquent behaviors had higher mean invincibility scores.
Child maltreatment Chamberlain, Stander, and Merrill (2003)	Military	Literature review	Child abuse rates among military and civilian populations were not significantly different. Risks included financial burden, low rank, installations with limited resources, deployment stress, social isolation, and young parent. Protective factors included good coordination of psychological professionals in military community.
Cronin (1995)	Military, civilian 683 college students from active duty and military families	Quantitative, cross-sectional, observational, survey, convenience	Military children reported a significantly higher percentage of spousal violence than civilian children.
Dubanoski and McIntosh (1984)	Military, civilian 2,172 cases of child abuse in Hawaii between 1978 and 1981	Quantitative, cross-sectional, observational, medical record review, population	No significant differences in frequency between military and civilian child abuse cases were found.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Jellen, McCarrroll, and Thayer (2001)	Military 181 cases of child emotional abuse	Quantitative, cross-sectional, observational, convenience	Primary emotional abuse was found in 26% of cases, while emotional abuse with child physical abuse and child neglect was found in 14% of cases. The more severe the case, the more likely it was to be substantiated.
Martin et al. (2007)	Military (Army) 10,864 Army soldier family violence offenders	Quantitative, cross-sectional, observational, population	Family violence offenders were more likely to be male and enlisted and less likely to be White. The most common form of family violence was spouse offender followed by child offender. Neglect was most common offense against children.
McCarrroll et al. (1999)	Military (Army) U.S. Army child abuse perpetrators and victims between 1975 and 1997	Quantitative, longitudinal, observational, population	Rates of neglect have decreased by 24% from 1991 to 1997. Rates of minor physical abuse declined 28% from 1993 to 1997. Rates of major physical abuse and sexual abuse remained unchanged. Rates of emotional abuse cases more than doubled from 1988 to 1997.
McCarrroll, Ursano, Zizhong, and Newby (2004)	Military (Army) About 826,000 civilian, 2,843 military child maltreatment victims	Quantitative, longitudinal, observational, population	There was no difference found in the rates of physical, sexual, and emotional abuse (by age and sex) between national civilian and Army cases. A higher rate of child neglect across age and emotional abuse for girls 16 to 17 for U.S. civilians was found.
Miller and Veltkamp (1993)	Military	Literature review	Risk factors for perpetrators of family violence included multigenerational pattern of abuse, veteran post-traumatic stress disorder (PTSD), passive/dependent parent, poor marital relationship, minimal social contacts outside family, inadequate coping skills, and no intervention. Victims experienced trauma accommodation syndrome. Treatment for victim and perpetrator should involve several professionals.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Mollerstrom, Patchner, and Milner (1992)	Military (Air Force)	Literature review	<p>Authors discussed the Air Force's Family Advocacy Program, which focuses on preventing family maltreatment and enhancing the health and well-being of Air Force families. Spouse abuse was more prevalent than child maltreatment. Common characteristics of victims and perpetrators included history of alcoholic problems.</p>
Mollerstrom, Patchner, and Milner (1995)	Military (Air Force) 19,587 cases of child abuse and neglect	Quantitative, cross-sectional, observational, population	<p>The rate of child abuse cases rose steadily in the United States between 1985 and 1990. The rate of substantiation in the Air Force was consistently in the 46% to 51% range, higher than the estimated average in the national civilian population.</p>
Raiha and Soma (1997)	Military (Army) 8,422 cases of child abuse in active duty Army families	Quantitative, cross-sectional, observational, population	<p>The overall rate of child abuse was lower in the Army than in the civilian population in 1992 and 1993. Neglect was the most common form of child abuse, and boys were neglect victims more often than girls and were at greatest risk for minor physical abuse in Army families.</p>
Rentz et al. (2007)	Military (Army, Navy, Air Force, Marine Corps) 1,392 military children, 145,960 civilian children	Quantitative, cohort, observational, record review, population	<p>The rate of substantiated military child maltreatment doubled in the period after October 2002. The military child maltreatment rate increased approximately 30%, with each 1 percentage point increase in the proportion of soldiers with at least one child and soldiers who departed to or returned from operational deployment. The child maltreatment rate in civilian families was static during the same period.</p>

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Rumm, Cummings, Krauss, Bell, and Rivara (2000)	Military (Army) 21,643 Army families with children who identified cases of spouse abuse	Quantitative, cohort, observational, record review, population	Families with spouse abuse were twice as likely to have a substantiated report of child abuse compared to military families with no spouse abuse. Spouse abuse was identified as an independent risk factor for child abuse.
Schaeffer, Alexander, Bethke, and Kretz (2005)	Military (Army) 765 Army mothers and fathers receiving services from Army New Parent Support	Quantitative, cross-sectional, observational, survey, convenience	Army mothers were significantly more depressed and had significantly less satisfying social networks than Army fathers. Depression, parental stress, family conflict, family cohesion, marital adjustment, and satisfaction with social support were significantly related to child abuse among Army mothers. Depression, parental stress, family conflict, and family expressiveness were significantly related to child abuse among Army fathers.
The impact of deployment on military children Amen, Jellen, Merves, and Lee (1988)	Military	Literature review	The most important factor related to a child's adjustment to parental absence was the child's emotional development. Emotional development, satisfaction level with the military, community support, and management of reunion of left-behind parent were critical factors in child's emotional outcome during deployment phases. Army supports need to be standardized at post and unit levels to serve families of deployed soldiers.
Angrist and Johnson (2000)	Military (Air Force, Marines) 59,930 active duty soldiers, Reservists, officers, enlisted personnel	Quantitative, cross-sectional, observational, survey, population	The deployment of female soldiers led to a statistically significant increase in divorce rates, suggesting deployment of women placed a marked strain on marriages. There was no statistically significant increase in physical, emotional, and/or intellectual disability rates among the children of deployed personnel.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Applewhite and Mays (1996)	Military (Army) 110 children, aged 4 to 18, of active duty fathers and mothers	Quantitative, cross-sectional observational survey, convenience	There was no difference in the psychosocial functioning between children of deployed mothers and children of deployed fathers. Children of active duty mothers scored significantly lower in "learning style," while children of active duty fathers scored significantly lower on measures of peer relationships, handling learning demands, and expression of feelings.
Barker and Berry (2009)	Military (National Guard, Army) 57 families with at least one young child	Quantitative, cross-sectional, observational survey, convenience	Young children with a deployed parent have increased behavior problems during deployment and increased attachment behaviors at reunion compared with children whose parents had not experienced a recent deployment. Children's behavior problems and attachment behaviors were related to child age and temperament, length of the deployment, and number of moves.
Barnes, Davis, and Treiber (2007)	Civilian, military 121 (48 civilian, 53 military) nondeployed, 20 military adolescents	Quantitative, cross-sectional, observational survey, convenience	Dependents with deployed military family members exhibited significantly higher heart rates than other groups. Ethnicity by group interactions indicated that Caucasian-deployed dependents had higher stress scores.
Bowen, Mancini, Martin, Ware, and Nelson (2003) ^a	Military (Air Force) 17,161 Air Force members who had been accompanied to their base assignments by their families	Quantitative, cross-sectional, observational survey, convenience	Sense of community mediated the effect of unit and community network support on family adaptation. People living on the base and living overseas reported greater sense of community than people living off base. Those who were at their current base assignments for a longer period reported lower levels of sense of community.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Chandra et al. (2009)	Military (Army, Navy, Marines, Air Force, and National Guard) 1,507 children from Reservist/Guard and active duty families	Quantitative, cross-sectional, observational, phone interview, convenience	Caregiver mental health was significantly related to child well-being, particularly child academic engagement. The total number of months deployed was significantly related to a greater number of child difficulties and well-being problems. Living in on-base housing was significantly related to fewer deployment challenges. Caregivers who were employed reported more children's problems with well-being.
Chandra, Martin, Hawkins, and Richardson (2010)	Military 148 teachers and administrators at 12 schools serving a large number of military children	Qualitative, cross-sectional, focus group, interviews, convenience	Although some children seem to be coping well with deployment, school staff felt that children's anxiety related to parental absence, increased responsibilities at home, poor mental health of some nondeployed parents, and difficulty accessing mental health services affected the ability of other students to function well in school.
Chartrand, Frank, White, and Shope (2008)	Military (Marines) 169 parents and child care providers of children aged 1½ to 5 years enrolled in on-base child care centers	Quantitative, cross-sectional, observational, survey, convenience sample	After controlling for caregiver's age, stress, and depressive symptoms, children aged 3 years or older with a deployed parent exhibited increased behavioral symptoms compared with same-aged peers without a deployed parent.
Cozza, Chun, and Polo (2005)	Military (National Guard)	Literature review	Authors found that three principal wartime stressors on military children were deployment, injury/illness of military parents, and parental deaths. Children of military personnel experienced higher levels of anxiety and depression, yet the severity varies. Scientific interest has focused on the response of other family members (i.e., left-behind parent, children). Left-behind parents may share information that is developmentally inappropriate and may communicate own sense of grief and loss related to injury.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Faber, Willerton, Clymer, MacDermid, and Weiss (2008)	Military (Army) 34 Reservists, spouses, and family members recruited from an Army Reserve unit that was deployed to Iraq for 15 months in 2003	Qualitative, longitudinal, descriptive, interviews, purposive	During deployment, family members experienced ambiguous absence, characterized by the Reservist's psychological presence but physical absence within the family. Family members also experienced boundary ambiguity around safety, redistribution of roles and responsibilities, and rejoining the family.
Flake, Davis, Johnson, and Middleton (2009)	Military (Army) 101 Army spouses with a deployed service member and a child aged 5 to 12 years	Quantitative, cross-sectional, observational, survey, convenience	Parenting stress significantly predicted an increase in child psychosocial morbidity. Parents utilizing military support reported less child psychosocial morbidity, and parental college education was significantly related to a decrease in child psychosocial morbidity. There were no significant effects of military rank, child gender, child age, and race or ethnic background on child psychosocial morbidity.
Forbes, Weiss, and Folen (1992)	Military 86 children aged 2 to 13	Quantitative, cross-sectional survey, convenience	The percentage of children co-sleeping at a frequency of more than one night per week nearly doubled with father absence. The child was the most frequent initiator of co-sleep and asked to co-sleep more frequently during father's absence. Reasons for co-sleeping included "nightmares and fears" with father present and "child is lonely" during father absence. Girls co-slept more nights than did boys during father absence.
Gorman et al. (2010)	Military 642,397 children aged 3 to 8 and 442,722 military parents	Quantitative, retrospective cohort, medical records	The IRR of children with a deployed parent compared to children with a parent at home was 1.11. The IRR of pediatric anxiety, behavioral, and stress disorders for children with a deployed parent compared with when a parent was at home were 1.14, 1.19, and 1.18, respectively.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Hiew (1992)	Military (Canadian military) 66 military children, 66 mothers of military children, 66 teachers	Quantitative, observational, cross-sectional, survey, convenience	Father absence, which produced a loss of perceived social support by wives, was negatively correlated to behavioral adjustment and academic performance of their children. Children reported the most stress during actual father absence, and emotion-focused coping was most commonly used. Children who also used more social support seeking to cope with father absence showed less acting out behaviors in the classroom.
Hillenbrand (1976)	Military (Marines) 126 boys and girls	Quantitative, cross-sectional, observational, survey, convenience	For boys, experiencing father absence earlier in life was associated with greater aggressiveness, irritability, and more depression and impulsiveness. For girls, the only significant relationship found was that earlier absence was related to lower quantitative ability. A high significant correlation for first-born boys between amount of father absence and increased quantitative ability was found. Boys with older siblings manifested more aggression and dependency when paternal absence occurred earlier in life.
Hosek, Kavanagh, and Miller (2006)	Military (Army, Navy, Marines, Air Force) 21,112 active duty service members (quantitative), 273 active duty service members (qualitative)	Mixed methods, cross-sectional, observational, survey, random sampling	Deployment pay helped offset family's financial difficulties. Family separation, high tempo, long work hours, and uncertainty surrounding deployment significantly affected higher than usual stress and intention to stay. Authors recommended that these aspects be addressed through improved access to communication channels for deployed personnel.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Huebner and Mancini (2005)	Military 107 adolescents who have experienced parental deployment	Qualitative, cross-sectional, focus groups, purposive	Adolescents showed resiliency in response to change during deployment. Adolescents demonstrated great maturity when taking on more home responsibilities, however, experienced behavior changes when daily routines were disrupted (i.e., missing school activities). Adolescents who felt supported by others had greater resiliency.
Huebner, Mancini, Wilcox, Grass, and Grass (2007)	Military (Army, Navy, Air Force, Marines, National Guard, and Reserves) 107 girls and boys between 12 and 18 years old who had experienced parental deployment	Qualitative, observational, grounded theory, focus group interview, purposive	Adolescents experienced uncertainty and boundary ambiguity as household roles and responsibilities are shifted repeatedly when a parent is deployed and reintegrated repeatedly. Thirty-four participants reported several signs consistent with depression and anxiety. Adolescents experienced family emotional intensity, lashing out, and detached relationships with left-behind caregivers. Adolescents reported difficulties with reintegration, including reestablishing household roles and routines.
Jensen, Grogan, Xenakis, and Bain (1989)	Military (Navy) 178 children, 183 mothers, 166 fathers, and 169 teachers	Quantitative, cross-sectional, observational, survey, convenience	Children whose fathers had been absent 1 or more months during the previous 12 months experienced significantly higher self-reported depression and anxiety, but these symptoms were not apparent to adult observers (parents and teachers). When controlling for maternal psychiatric symptoms and inter-current family stressors, the effects of father absences on children's functioning and psychiatric symptoms were not demonstrated.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Jensen and Shaw (1993)	Military	Literature review	Ability to exert active role or control over one's responses to stressors, age, internal locus of control, developmental stage, cognitive defense mechanisms, parental support and ability to acclimate, and "hero" status of deployed parent mediated the effects of war on children. Authors recommended school-based interventions, psychosocial programs, group interventions, and school psychological interventions.
Kelley et al. (2001a)	Military (Navy), civilian 52 deployed Navy mothers, 75 nondeploying Navy children, and 32 civilian children	Quantitative, cross-sectional, observational, survey, convenience	Navy children with deployed mothers exhibited higher levels of internalizing behavior than children with nondeployed Navy mothers. Navy children whose mothers experienced deployment were more likely to exhibit clinical levels of internalizing behavior than Navy children with nondeployed mothers or civilian children.
Kelley et al. (2001b)	Military (Navy), civilian 84 mothers (deployed Navy mothers, nondeployed Navy mothers, and civilian mothers)	Quantitative, cross-sectional, observational survey, convenience	Navy children with deployed mothers exhibited higher levels of internalizing behavior than children with nondeployed Navy mothers. Navy children whose mothers experienced deployment were more likely to exhibit clinical levels of internalizing behavior than Navy children with nondeployed mothers or civilian children. Group differences, however, were modest, and overall mean scores were in the normal range.
Levai, Kaplan, Ackermann, and Hammock (1995)	Military (Navy), civilian 103 Navy children and 103 civilian children	Quantitative, cross-sectional, observational, secondary data analysis, convenience	Deployment of the father placed Navy children and adolescents at risk for psychiatric hospitalization, mainly in nonintact families (e.g., left-behind stepparents or single parents).

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Lester et al. (2010)	Military (Army and Marines) 272 children and their at-home civilian, 163 recently returned, 65 active duty parents	Quantitative, observational, interviews, convenience	Parental distress and cumulative length of parental combat-related deployments during the child's lifetime independently predicted increased child depression and externalizing symptoms. While behavioral adjustment and depression levels were comparable to community norms, anxiety was significantly elevated in children in both deployment groups. Parental distress was greater in those with a deployed spouse, compared with nondeployed. Findings indicate that parental combat deployment has a cumulative effect on children that remains even after the deployed parent returns home and that is predicted by psychological distress of the parent.
Lincoln, Swift, and Shorteno-Fraser (2008)	Military	Literature review	Authors found that military children's psychological vulnerability and behavioral risks occur if deployments were combat related, extended, and resulted in parent injury or death.
Lyle (2006)	Military (Army)	Quantitative, experimental method (Two-stage least squares)	Parental absences adversely affected children's test scores by a 10th of a standard deviation. Household relocations had modest negative effects on children's test scores. Parental absences and household relocations have the greatest detrimental effect on test scores of children with single parents, children with mothers in the Army, children with lower ability parents, and younger children.

(continued)

TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
MacDermid, Sampet, Schwarz, Nishida, and Nyaronga (2008)	Military	Literature review	Factors that promote resilience in military children during deployment included positive and nurturing relationships with parents and other adults, cognitive skills, the ability to regulate emotions, and self-esteem. Interventions that promote positive parenting practices and parent-child interactions were advised. Research indicated that practitioners should provide children and adolescents with opportunities to develop supportive relationships outside the family that provide both warmth and structure, such as with peers, teachers, and mentors.
Mansfield, Kaufman, Engel, and Gaynes (2011)	Military (Army)	Quantitative, longitudinal, observational, records, convenience	Children with parental deployment had an excess of 6,579 mental health diagnoses during the 4-year period compared to children with nondeployed parents. Excess mental diagnoses associated with deployment were at greatest risk for acute stress reaction/adjustment, depressive, and pediatric behavioral disorders and increased with total months of parental deployment.
Medway, Davis, Cafferty, Chappell, and O'Hearn (1995)	Military Study 1, 117; Study 2, 154 female volunteers of deployed husbands during Operation Desert Storm	Quantitative, cross-sectional, observational, survey, convenience	Relationship quality was significantly correlated with positive ratings of military support, substantially higher personal distress score than previous studies; when disruption is low, ratings of support group helpfulness do not differentially impact on personal distress. Children who manifested problems during separation continued to manifest academic problems, anxiety, and behavior problems as late as 6 months following return. During separation, children were rated higher on academic problems and anxiety.

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TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Medway and Marchant (1987)	Military (Army) 170 military spouses and children living on the Fort Jackson Army base	Quantitative, cross-sectional, observational, survey, convenience	Frequent relocation was not found to be detrimental to service member or spouse and was positively associated with higher child and social competence. Military identification was correlated with well-being for service members but not for spouses. The degree of spouse military identification was more strongly related to children's adjustment than that of service members.
Mimari, Roche, Sudhinaraset, and Blum (2009) ^b	Military (Navy, Army, Marines, and Air Force) 39 military students, 24 parents, 35 school personnel divided into 11 focus groups	Qualitative, cross-sectional, observational, focus group, purposive	The major shift of roles and responsibilities included adolescents' increased household work and taking pride in new "adult" roles. Adolescents encountered challenges during a parent's return, which was seen as more stressful. Several strategies/factors that helped adolescents cope with stress and anxiety included parental attitudes, preparedness of schools, peer strategies, media, and technology. Teachers and counselors were not trained and sensitized for dealing with parent deployment among military students, and students perceived counselors as a "joke" in dealing with deployment.
Morris and Age (2009)	Military 65 military children	Quantitative, observational, cross-sectional, survey, convenience	Military children had elevated levels of conduct problems. Effortful control and maternal support were protective factors against conduct problems and emotional symptoms. Avoidant coping was significantly associated with greater emotional symptoms.

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TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Richardson et al. (2011)	Military (Army) 44,000 military children	Mixed methods, observational, cross-sectional, survey, interviews, purposive	Having a parent who has deployed 19 months or more was associated with lower tests scores among elementary and middle school students, but not high school students. Teachers report little connection with military installations, challenges with high mobility and psychological strain of military students, and lack of consistent information identifying military students.
Rohall, Weeshtler, and Segal (1999) ^a	Military (Army) 532 soldiers from two battalions	Quantitative, observational, cross-sectional, survey, convenience	Younger lower ranking soldiers reported lower family adjustment. Personal and organizational resources alleviated the negative effects of frequent deployments.
Weber and Weber (2005)	Military (Army, Navy, Air Force, Marines, National Guard) 159 military adolescent children	Quantitative, observational, cross-sectional, survey, convenience	Average number of relocations was 4.89. Children's behavior improved as they experienced more relocations, controlling for age. Relocation frequency predicted improved parental perceptions of relocations and decreased aberrant behavior of children.
Yeatman (1981)	Military (Army) 195 military spouses and 33 military service members	Quantitative, cross-sectional, observational, survey, convenience	High frequency of behavior problems occurred during parental separation due to the nonaccompanied military tour. Of 100 families who had experienced an unaccompanied tour, 66 reported a problem with at least one child. Of 97 families, 37 reported problems when the father returned, such as shyness, fear, resentment, separation anxiety, and severe difficulty with interaction.
Reintegration	Military 137 active duty Army spouses, 410 National Guard spouses, 174 Reservist spouses	Quantitative, cross-sectional, observational, survey, convenience	Reservist and National Guard spouses were less integrated into the military way of life than active duty spouses. Lower percentages of Reservist and National Guard spouses attend military family support groups. All three groups of spouses reported that they would not seek support from their unit or Army formal support programs for problems.

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TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Doyle and Peterson (2005)	Military (Army)	Literature review	<p>Authors stated that the Army and society should work together to provide programs and procedures that improve communication, mitigate distress, and resolve crises during reentry and reintegration. Programs should include early planning for re-entry and easy access to behavioral health professionals.</p>
Huebner et al. (2007)	<p>Military (Army, Navy, Air Force, Marines, National Guard, and Reserves) 107 military adolescents</p>	<p>Qualitative, observational, grounded theory, focus group interview, purposive</p>	<p>Adolescents experienced uncertainty and boundary ambiguity as household roles and responsibilities were shifted multiple times during repeated deployment and reintegration. Adolescents reported several signs consistent with depression and anxiety and experienced family emotional intensity, lashing out, and detached relationships with left-behind parents. Adolescents reported difficulties with reintegration, including reestablishing household roles.</p>
Medway et al. (1995) ^b	<p>Military Study 1, 117 wives; Study 2, 154 wives with deployed husbands</p>	<p>Quantitative, cross-sectional, observational, survey, convenience</p>	<p>Relationship quality was significantly correlated with positive ratings of military support, substantially higher personal distress score than previous studies; when disruption is low, ratings of support group helpfulness do not differentially impact on personal distress. Children who manifested problems during separation continued to manifest academic problems, anxiety, and behavior problems.</p>
Peebles-Kleiger and Kleiger (1994)	Military	Literature review	<p>Unlike previous wars, Desert Storm deployments were unexpected, brief, and abrupt, resulting in catastrophic stressors for military families. Desert Storm deployments resulted in prolonged trauma during the re-entry phase.</p>

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TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
War-related trauma of the returning veteran parent			
Al-Turkait and Ohaeri (2008)	Military (Army) 489 children of Kuwaiti veterans	Quantitative, observational, cross-sectional, survey, convenience	Children of POWs had higher anxiety, depression, and abnormal behavior than children whose parents were not POWs. Children of an Army parent with PTSD were significantly more depressed. Mother's PTSD, depression, and anxiety were significantly related to child's depression score.
Baranowsky, Young, Johnson-Douglas, Williams-Keeler, and McCarrey (1998)	Military, war victims	Literature review	Parental communication regarding the Holocaust, often characterized by obsessive retelling or all-consuming silence, and strong family ties are implicated in the theoretical literature on trauma transmission. Terms such as <i>vicarious</i> , <i>empathic</i> , and <i>secondary traumatization</i> have been used to describe intergenerational trauma transmission.
Cozza et al. (2010)	Military 41 spouses of combat-injured service members	Quantitative, observational, cross-sectional, record review, convenience	Children of parents who spent more time deployed between 2003 and 2006 experienced significantly higher rates of anxiety and depression than children whose parents were deployed for a shorter duration. In addition, the children whose parents deployed at least once, for an average of 11 months, as part of the U.S. Operation Iraqi Freedom or Operation Enduring Freedom in Afghanistan were more likely to experience adjustment difficulties and behavioral, depressive, or stress disorders than those whose parents never went to war.

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TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Dekel and Goldblatt (2008)	Military	Literature review	Authors examined father status (PTSD, non-PTSD, which war), what is transmitted from father to child (distress, poor family functioning, self-esteem), and mechanisms of direct and indirect transmission. Authors also examined variables that make intergenerational trauma more optimal (children's age, birth order, timing of father's injury, and gender).
Galovsky and Lyons (2004)	Military, civilian	Literature review	Veterans' PTSD following exposure to combat violence affected veterans' familial relationships and the psychological adjustment of family members. Veterans' numbing/arousal symptoms were especially predictive of family distress, troubled family relationships, and secondary traumatization among family members.
Goff, Crow, Reisbig, and Hamilton (2007)	Military (Army) 45 male Army soldiers and 45 female partners	Quantitative, cross-sectional, observational, survey, convenience	Trauma symptoms in soldiers significantly predicted relationship satisfaction for soldiers and their female partners. Depression and anxiety among soldiers did not significantly predict soldiers' relationship satisfaction and female partners' relationship satisfaction.
Motta, Joseph, Rose, Suozzi, and Ledierman (1997)	Military/civilian 45 children of veterans and 47 civilian children	Quantitative, cross-sectional, quasi-experimental survey, convenience	A statistically significant difference between the children of veterans and nonveterans was found only on the Stroop card containing war-related words. Modified Stroop task is a sensitive measure that may have value in assessing transmission of war experiences from parents to children.

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TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Rosenheck (1986)	Military 12 offspring children of World War II combat veterans	Quantitative, cross- sectional, observational, survey, interviews, convenience	Some offspring of WWII combat veterans demonstrated long-term transgenerational effects from their father's combat trauma. The children's conscious knowledge of the veteran's combat experience and the impact of the veteran on the affective life of his family and on his children varied among the five families studied.
Rosenheck and Fontana (1998)	Military 257 male Vietnam veterans who were living in households with children between ages 6 and 16 years old	Quantitative, cross- sectional, observational, survey, convenience	Children of veterans who participated in abusive violence showed more behavioral disturbance than children of other Vietnam veterans even after multivariate analysis was used to adjust for other factors such as PTSD symptoms, combat exposure, and post-military family relationships.
Rosenheck and Nathan (1985)	Military (Army) 1 child of an Army Vietnam veteran	Qualitative, case report	This case demonstrates the impact post-traumatic stress can have on the children of Vietnam veterans, both through the disruption of family functioning and through the exposure of the children to traumatic experiences that are directly connected to and virtual repetitions of their father's war experience.
Scaturro and Hayman (1992)	Military	Literature review	The consequences of combat trauma during various stages of family life, including the impact on courtship and mate selection, marriage, childbirth and childrearing, marriage in midlife, children leaving home, and retirement in late life, are reviewed.

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TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Solomon (1988)	Military	Literature review	Guilt feelings, emotional withdrawal, and elevated levels of aggression in returning veteran make it difficult for him to resume former roles of father, husband, and breadwinner. Wives and children of veterans showed psychiatric symptoms. Families were generally reluctant to seek professional help.
The military family in shifting social environments: The National Guard and Reservist families in civilian contexts Chartrand et al. (2008)	Military (Marines)	Quantitative, cross-sectional, observational, survey, convenience	After controlling for caregiver's age, stress and depressive symptoms, children aged 3 years or older with a deployed parent exhibited increased behavioral symptoms compared with same-aged peers without a deployed parent.
	169 parents and child care providers of young children in on-base child care center		
Chartrand and Seigel (2007)	Military	Literature review	Little is known about how combat deployments affect military children, especially during war. Authors suggested that Reservists and National Guard troops and families are most adversely affected by current deployments.
Drummet, Coleman, and Cable (2003)	Military	Literature review	Authors found that military families and children faced uniquely stressful experiences in the context of relocation, separation, and reunion. Authors proposed that Family Life Educators recognize military culture and variation of experience based on family characteristics (e.g., rank, Reservist vs. active duty, etc.).
Hoshmand and Hoshmand (2007)	Military	Literature review	Authors proposed research on military families and communities that include stressors and difficulties experienced by military families, community needs assessments, resiliency in military families and communities, community belonging, and use of available support. Authors also recommended community capacity building for social supports.

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TABLE 1 (continued)

Study	Participants	Research Design and Sampling	Findings
Huebner, Mancini, Bowen, and Orthner (2009)	Military	Conceptual paper	Authors proposed supporting military families during wartime deployment through a community capacity framework.
Huffman, Culbertson, and Castro (2008)	Military (Army) 230 Army soldiers from 10 units in Europe with high deployment load	Quantitative, cross-sectional, exploratory, survey	Perceived family-friendly environment was positively related to intentions to remain in military upon fulfillment of obligation. Perceptions of family-friendly environments were positively correlated to collective efficacy perceptions.
MacDermid et al. (2005)	Military, civilian 2,526 military families and 968 civilian families	Quantitative, longitudinal, observational, interviews, convenience	Overall, most military families with children younger than 6 experienced high or moderate financial risk. Military members spend more than civilian families for child care. Military families living in civilian housing had much less discretionary income than military families in military housing.
Palmer (2008)	Military	Literature review	Indirect effects of the military setting better account for child outcome than the direct effects of the military upon the child. For example, parent-child interactions serve as possible mechanism by which military risk and resilience factors impact military children.

a. This study is also mentioned in the military family in shifting social environments research theme section.

b. This study is also mentioned in the reintegration research theme section.

to trigger a mental “syndrome” as suggested by the military family syndrome theory. Rather, the findings reviewed suggest that risk factors surrounding war and military life do increase negative mental health outcomes.

Socio-ecological risk factors that influence mental health problems among military children in different contexts. Studies conducted during pre-Iraq and Afghanistan war contexts have identified factors that influence military children’s mental health. These include risk factors such as prolonged parental absences, frequent moves, isolation from the civilian community, and the uncertainty surrounding the potential loss of a family member. Other social and life stressors may also lead to mental health problems among military children (Ursano, Holloway, Jones, Rodriguez, & Belenky, 1989). A study of active duty service members’ children, in particular, found that significantly more active duty children than civilian children expressed fear and anxiety that a parent would die in war (Ryan-Wenger, 2001). In addition to risk factors, research has uncovered factors that promote healthy coping and positive mental health outcomes among military children. This research suggests that some military children may be coping well with general military life stressors such as fear of parental death and injury and separation.

Factors predicting positive mental health outcomes among military children during the pre-Iraq and Afghanistan period were located within the family context. In a study of 86 military mother and child dyads, Finkel, Kelley, and Ashby (2003) found that family cohesiveness, relationships with mothers, length of time in residence, and the depressive symptoms of the left-behind parent predict a military child’s loneliness, peer relationship quality, and self-esteem.

Studies conducted in the current Iraq and Afghanistan war contexts. Research conducted during the Iraq and Afghanistan war contexts suggests higher rates of mental health symptoms among military children when compared to civilian children. In a study of adolescent military children of both active duty and retired military parents, Wickman, Greenberg, and Boren (2010) found that the percentage of military adolescents reporting substance abuse and sexual risk behavior was lower than the national average; however, the percentage of military adolescents in the sample who reported thinking about hurting or harming themselves was higher than the national average. In a retrospective cohort study on military children and military deployments, Gorman and colleagues (2010) further found that during the 2005–2006 fiscal year the number of mental and behavioral health visits increased by 11%, behavioral disorders increased by 19%, and stress disorders increased by 18% in military children when a military parent deployed. In addition, rates significantly increased among adolescents and children of married and male military parents. Moreover, research suggests that the higher prevalence of mental health problems among military children coincides with the current deployment schedule (i.e., prolonged and frequent deployments). Cozza and colleagues (2010) found that children of parents who spent more time deployed between 2003 and 2006 experienced significantly higher rates of anxiety and depression than children whose parents were deployed for a shorter duration. In addition, the children whose parents deployed at least once, for an average of 11 months, as part of the U.S. Operation Iraqi Freedom or Operation Enduring Freedom in Afghanistan

were more likely to experience adjustment difficulties and behavioral, depressive, or stress disorders than those whose parents never went to war.

While military children's mental health problems during the current war context are concerning, recent research suggests that military children develop resilience after repeated stressors. Weber and Weber (2005) found that among a sample of military adolescents, there was a significant negative relationship between relocation frequency and aberrant behavior. Among researchers and practitioners, there is growing consensus that two factors—extended deployments to Iraq and Afghanistan and increased Reservist participation—have contributed to the psychological burdens of military children and their families. Hence, military-connected schools with large proportions of military children with deployed parents may be experiencing various challenges in responding to increasing mental health issues.

Child Maltreatment

In representative studies of children in urban schools, research has found that child maltreatment has adverse effects on student academic achievement and long-term postsecondary outcomes (Boden, Horwood, & Fergusson, 2007; Eckenrode, Laird, & Doris, 1993; Lansford et al., 2002). Studies on military child maltreatment in military families have used diverse research designs and have been conducted in different historical and war contexts. Studies conducted prior to the current war context found no significant differences in rates of child maltreatment between military and civilian families and also that child maltreatment rates in military families remained stable throughout the 1980s and 1990s. Recent research during the Iraq and Afghanistan war context indicates that military families have experienced an increased rate of child maltreatment. Schools that have significant proportions of military children may have to respond to child maltreatment cases and the potential effects on academic outcomes.

Characteristics of at-risk military families and perpetrators. Research on the risk factors for military child maltreatment has been conducted since the 1990s and includes both the pre-Iraq and Afghanistan and Iraq and Afghanistan war contexts. These studies suggest that there are risk factors for child maltreatment specific to military families. Studies prior to the Iraq and Afghanistan wars have identified characteristics of military families likely to have child maltreatment. These include having a low-ranked military service member as the head of the household (Mollerstrom, Patchner, & Milner, 1992, 1995; Raiha & Soma, 1997) and a high degree of social isolation (Miller & Veltkamp, 1993). Spousal abuse has also been found to be a significant problem for military families and also significantly predicts child maltreatment (Cronin, 1995; Rumm, Cummings, Krauss, Bell, & Rivara, 2000). In a longitudinal study of military families, Rumm and colleagues (2000) found that military families with domestic violence were twice as likely to have child maltreatment compared to military families with no domestic abuse.

Researchers have also examined child maltreatment perpetrators' individual characteristics. Perpetrators are likely to be male. A longitudinal study of child maltreatment conducted during the Iraq and Afghanistan war context, for instance, found that perpetrators of child abuse, perpetrators of spousal abuse, and perpetrators

of both child and spousal abuse were more likely to be male Army soldiers than female Army soldiers (Martin et al., 2007). Research prior to the Iraq and Afghanistan wars identified veteran perpetrators' individual characteristics, including a multigenerational abuse pattern experienced prior to service, minimal social contacts outside the family, inadequate coping skills, lack of utilization of interventions, and exposure to violence in war (Miller & Veltkamp, 1993; Schaeffer, Alexander, Bethke, & Kretz, 2005). These individual characteristics indicate that childhood experiences, a high degree of social isolation, and lack of access or utilization of mental health supports contribute to a veteran's risk of maltreating children.

Child maltreatment during the pre-Iraq and Afghanistan wars. Studies conducted prior to the Iraq and Afghanistan wars indicated that child maltreatment rates in Army families were similar to rates in civilian families. Dubanoski and McIntosh (1984) found no significant differences in the rates of child abuse and neglect between military and civilian families. In a study of Army families, Raiha and Soma (1997) found that the overall child abuse rate was lower in the Army than in the civilian population in 1992 and 1993. More recently, in a longitudinal study comparing child maltreatment rates in Army and civilian families between 1995 and 1999, McCarroll, Ursano, Zizhong, and Newby (2004) found no difference in rates of physical, sexual, and emotional abuse between national civilian and Army cases. McCarroll and colleagues further found that neglect rates were markedly lower in Army families than civilian families.

Studies during this time period also suggested that military child maltreatment rates remained stable or declined between the 1970s and 1990s. In a longitudinal study of child maltreatment from 1975 to 1997, McCarroll and colleagues (1999) found that most types of child abuse decreased or remained unchanged throughout the 1990s. McCarroll and colleagues found substantially decreased child neglect rates and minor physical abuse and unchanged rates among physical abuse and sexual abuse between 1992 and 1996. In contrast, emotional abuse cases doubled between 1988 and 1997. The most common forms of abuse found in military families have been emotional abuse and child neglect (Jellen, McCarroll, & Thayer, 2001; Raiha & Soma, 1997).

While pre-Iraq and Afghanistan studies tracking military child maltreatment from the 1970s to 1990s yield conclusive findings, the validity of these studies is subject to flawed databases. Chamberlain, Stander, and Merrill (2003) found that the Army's central registry data has flawed reporting procedures and ambiguous definitions of types of child maltreatment. In addition, Chamberlain and colleagues asserted that the Family Advocacy Program (FAP) registry and Child Protective Services (CPS) databases in civilian agencies often generate flawed conclusions since there are no standardized methods for recording child abuse and are subject to data entry errors.

Child maltreatment studies conducted during the Iraq and Afghanistan wars. The most recent research on military child maltreatment accounts for the wars in Iraq and Afghanistan and suggests increasing child maltreatment rates in families across the military branches. In a retrospective cohort study of military children,

Rentz and colleagues (2007) found that substantiated military child maltreatment doubled in the period after October 2002 compared to the period prior. The child maltreatment rate in civilian families was static during the same period. These findings suggest that both departures to and returns from operational deployment impose stressors on military families and likely increase child maltreatment rates.

In general, while the research literature on military child maltreatment has been conducted across historical and war contexts with diverse quantitative research designs, this literature also suggests that the current Iraq and Afghanistan wars are associated with higher child maltreatment rates in military families. Stressful experiences for military parents specific to the current wars, including prolonged and repeated deployments, may contribute to higher military child maltreatment rates.

The Impact of Deployment on Military Children

The anticipation of a parent being deployed to a war zone, parental separation, the stress of the left-behind parent, and changing household roles and responsibilities are major factors that predict negative psychological and behavioral health outcomes among military children (White, De Burgh, Fear, & Iverson, 2011). Research conducted across war contexts has found that supportive emotional contexts (i.e., supportive family members, access to health care and community mental health agencies) moderate the adverse effects of deployment. In addition, more recent research suggests that public schools are struggling to support the academic functioning and social and emotional well-being of military students.

The deployment cycle. Amen, Jellen, Merves, and Lee (1988) theorized that military families experience deployment in three phases—pre-deployment, deployment, and post-deployment. In the pre-deployment phase, a military family prepares for the military parent's departure. In the deployment phase, a military family psychologically adjusts to a service member's separation and copes with the challenges associated with separation. Family responsibilities may shift as a result. Finally, in the post-deployment phase, families experience the joy of reunion and support the reintegration of the returning parent(s) into society.

Throughout the deployment phases, military children experience stressors, including parental separation, redistribution of household roles and responsibilities (Huebner & Mancini, 2005), the left-behind parent's added stress and anxiety (Chandra et al., 2010), the child's fears and anxieties about financial limitations (Huebner, Mancini, Wilcox, Grass, & Grass, 2007), possible geographic relocation (Weber & Weber, 2005), and parental injury and death (Cozza, Chun, & Polo, 2005; Flake, Davis, Johnson, & Middleton, 2009; Medway & Marchant, 1987; Mmari et al., 2009). The deployment phase also results in what Huebner and colleagues (2007) refer to as "boundary ambiguity," where the deployed parent is physically absent and psychologically present with the family.

Mental health issues surrounding deployment. Researchers have found that military children have experienced mental health problems as a result of deployment-related stressors. First, studies across war contexts have found externalizing symptoms (e.g., behavioral problems) of mental health issues among military children

and adolescents with deployed parents. In an early study of military children with Marine fathers, Hillenbrand (1976) found that for young boys with older siblings, increased aggression was related to a father's deployment-related absence. More recently, Chartrand, Frank, White, and Shope (2008) found that children 3 years of age or older with a deployed parent had higher Child Behavior Checklist (CBCL) externalizing and total scores compared with same-aged peers without a deployed parent. Similarly, in a study of young children in National Guard and Army military families, Barker and Berry (2009) found that young children with a deployed parent had more behavioral problems in comparison to children whose parents were not deployed. In a recent study of military adolescents, Chandra and colleagues (2009) found that female children and adolescents reported significantly more peer conflicts during a parent's deployment to Iraq and/or Afghanistan across all five military branches. Recent research has also found increased mental health care services use and more mental health diagnoses during deployment. In a retrospective cohort study on military children and military deployments, Gorman and colleagues (2010) found that during the 2005–2006 fiscal year, the number of mental and behavioral health visits increased by 11%, behavioral disorders by 19%, and stress disorders by 18% in military children during a parental deployment. Moreover, in a study of children of active duty Army personnel, Mansfield, Kaufman, Engel, and Gaynes (2011) found that during a 4-year period (2003–2006), the prevalence of mental health diagnoses among children whose parents were deployed exceeded the prevalence of the mental health conditions among children whose parents were not deployed by 6,579 cases. Also, diagnosed children with deployed parents were at greatest risk for acute stress reaction/adjustment, depressive, and pediatric behavioral disorders, which increased with total months of parental deployment. Also, when compared to younger military children, research has found that military adolescents have had significantly more mental and behavioral health visits, behavioral and stress disorders, and mental health diagnoses during the current wars (Gorman et al., 2010; Mansfield et al., 2011).

Parental separation. Several studies have found that the repeated and prolonged absence of deployed military fathers has adversely affected military children's psychological, behavioral, and physical health outcomes across war contexts (Barnes, Davis, & Treiber, 2007; Jensen, Grogan, Xenakis, & Bain, 1989; Levai, Kaplan, Ackermann, & Hammock, 1995; Yeatman, 1981). In a study of 178 children of senior enlisted personnel serving in active duty in the U.S. Army, Jensen and colleagues (1989) found that children whose fathers were deployed for more than a month had significantly higher stress levels and more frequent depressive- and anxiety-related symptoms than children whose fathers were deployed for less than one month. Studies have also suggested that deployment-related parental separation predicts higher heart rates (Barnes et al., 2007), stress (Hiew, 1992), elevated anxiety levels (Lester et al., 2010), and greater rates of co-sleeping with a left-behind parent or sibling (Forbes, Weiss, & Folen, 1992).

Research has also found that the deployment of military mothers has resulted in negative psychological and behavioral outcomes among military children (Applewhite & Mays, 1996; Kelley et al., 2001a). In a study of deployed Navy

mothers and their children, children exhibited higher levels of behavioral problems compared to children of nondeployed Navy mothers (Kelley et al., 2001a, 2001b). Research also suggested that deployment-related maternal and paternal separations are qualitatively different experiences for military children. In a study comparing children with deployed mothers to children with deployed fathers, Applewhite and Mays (1996) found some significant psychological differences between the two groups. Children with deployed mothers scored significantly lower in academic achievement measures, while children with deployed fathers scored significantly lower on measures of peer relationships, handling learning demands, emotional expression, and physical health. There were no significant differences in psychosocial functioning between children of deployed mothers and children of deployed fathers (Applewhite & Mays, 1996).

Stress of left-behind parent and family. Left-behind parents often raise children alone, are their children's sole educational advocate, and manage household responsibilities. In response to these demands, left-behind parents may alter their employment schedule and/or status. He or she may also decide to relocate to be near extended family members, who can provide financial, social, and emotional support. Numerous studies have found that during deployment, left-behind parents experience stress and anxiety (Cozza et al., 2005; Medway, Davis, Cafferty, Chappell, & O'Hearn, 1995; Morris & Age, 2009), and the stress and anxiety of the left-behind parent negatively impacts the psychological and behavioral outcomes of military children. Cozza and colleagues (2005) found that the stress of the left-behind parent is transferred to the child when the remaining parent shares developmentally inappropriate information with the child or communicates his or her own sense of grief, loss, and/or fear of spousal injury or death. Morris and Age (2009), however, found that maternal support serves as a protective factor against the development of behavioral and emotional problems. Research also suggests that military adolescents experience unique stressors as a result of the left-behind parent's redistribution of household roles and responsibilities. Changing family roles and responsibilities place additional stress on the adolescent child (Mmari et al., 2009). In a qualitative study of adolescent youth coping during deployment, Mmari and colleagues (2009) found that adolescents' family roles expanded to include household duties normally reserved for adults. Deployment-phase responsibilities included increased household work such as more chores and taking care of younger siblings. Mmari and colleagues also found that the military adolescents in their study took pride in assuming more "adult" roles.

School experiences and deployment. While the bulk of past research on the impact of deployment has focused on psychological and behavioral outcomes, more recently, studies have examined the impact of deployment on the academic outcomes and school experiences of military children (Angrist & Johnson, 2000; Engel, Gallagher, & Lyle, 2010; Lyle, 2006). In a study of U.S. Army personnel data and children's standardized test scores in Texas, Lyle (2006) found that deployment-related parental absences and household relocations detrimentally affect children's test scores, especially those with single parents, those with mothers in the Army, those with lower ability parents, and young children. Angrist and

Johnson (2000) further found increases in intellectual, physical, and emotional disability referrals or identification rates among military children during a deployment. Deployment length is also significantly related to negative academic outcomes. In a recent study of 44,000 military students attending military-connected schools in Washington state and North Carolina, Richardson and colleagues (2011) found that having a parent who is deployed for 19 months or more is associated with lower test scores among both elementary and middle school students.

In addition to negative academic outcomes, recent studies have also found negative social and emotional outcomes among military students; specifically, deployment-related behavior problems (i.e., fights with other students at school) can potentially lead to a reduction in school engagement and connectedness (Chandra et al., 2010). In a study of the children of deployed soldiers, Chandra and colleagues (2010) found that parents and school staff believed that deployment-related stressors influenced the military child's anxiety at school. These stressors included parental absence, increased responsibilities at home, the poor mental health of some nondeployed parents, and difficulty accessing mental health services. Chandra and colleagues also found that parents and school staff perceived that deployment-related stressors also contributed to military children's difficulties in academic functioning and school engagement.

Coping positively with deployment-related stressors. Researchers have identified several individual characteristics and military-specific factors that mitigate the potentially negative effects of deployment-related stressors on the psychological and behavioral outcomes of military children. Military children adapt well to wartime stressors when they exert an active role or ability to control their responses to stressors, have strong cognitive defense mechanisms (Jensen & Shaw, 1993) and coping skills (Morris & Age, 2009), and are able to acclimate in order to handle parental separation. Studies have also found that age and military children's emotional development stage are critical factors in coping well with deployment-related stressors (Amen et al., 1988; Barker & Berry, 2009; Huebner & Mancini, 2005; Jensen & Shaw, 1993). For instance, in a study of military adolescents who have experienced parental deployment, Huebner and Mancini (2005) found that military adolescents demonstrated great maturity in the absence of a deployed parent. Adolescents reported taking on more household responsibilities, emotionally supporting a left-behind parent, and caring for younger siblings.

Studies have suggested that military children develop healthy coping and adaptive skills since they are repeatedly exposed to deployment-specific stressors. Studies on military children experiencing repeated geographic relocation, in particular, found that military children do not struggle psychologically or behaviorally as they reach later stages of childhood. In a study of geographic relocation of Army families, Medway and Marchant (1987) found that frequent relocation between military bases was not found to be psychologically detrimental to service members, their spouses, or children. Instead, as military families experienced more relocation, they reported greater family adjustment and higher social competence among military children (Medway & Marchant, 1987). In addition, Weber and Weber (2005) further found that as military families experienced more relocation,

parental perceptions of relocation improved and aberrant behavior of military children decreased across all five branches.

Supportive contexts and deployment. Research across war contexts suggests that emotionally supportive social contexts (i.e., family, community, and military installations) help military children manage deployment-related stressors. In the family unit and household, studies have found that the degree to which left-behind caregivers create healthy home environments and manage their personal stress is critical to the behavioral and psychological outcomes of military children. Protective factors include the degree of social support and care provided by a left-behind parent (Jensen & Shaw, 1993; Medway et al., 1995), the left-behind parent's ability to manage the potential psychological stressors of the deployment process (Amen et al., 1988), and utilization of military family support groups (Faber, Willerton, Clymer, MacDermid, & Weiss, 2008). In addition to emotional supports, structural supports such as financial stability, stable parental employment and housing conditions, and family recognition of the "hero" status of the deployed parent mitigate the adverse psychological effects of wartime stressors on military children (Jensen & Shaw, 1993). More recently, MacDermid, Samper, Schwarz, Nishida, and Nyaronga (2008) found that factors promoting resilience in military children include positive and nurturing relationships with parents and other adults, cognitive skills, the ability to regulate emotions, and self-esteem.

Outside the family unit and household, studies have suggested that supportive and responsive external contexts such as civilian communities and military installations are necessary for responding to military families' and children's social and emotional needs during deployment (Amen et al., 1988; Bowen, Mancini, Martin, Ware, & Nelson, 2003; Cozza et al., 2005; Hosek, Kavanagh, & Miller, 2006; Jensen & Shaw, 1993). For instance, in order to facilitate healthy adjustment to deployment-related stressors, Amen and colleagues (1988) recommend that social service providers in military installations, schools, and other military nonprofit organizations be trained in military family issues, share resources, and follow guidelines so that they can respond more effectively to the needs of military children and families during deployment. In addition, in a study of Air Force military spouses, Bowen and colleagues (2003) suggested that service providers at military installations and military-related nonprofit organizations need to provide services and foster a sense of community (i.e., the degree to which military families feel positively attached to a military branch as an organization and perceive the military base as a source of support and connection to other military families) with military families and children. This is particularly important for the families of low-ranking soldiers, who may demonstrate the most need for military social supports. Rohall, Weschler, and Segal (1999) found that families of low-ranking soldiers had low family adjustment but that organizational resources such as psychiatric and medical supports alleviated the negative effects of repeated deployments. Hosek and colleagues (2006) further recommend that the military branches provide family members with increased access to military family support programs addressing financial and psychological stress, family separation, and long work hours.

Civilian public schools have emerged as significant external contexts that can help military children cope with deployment-related stressors. Research conducted

in the current Iraq and Afghanistan war context has indicated that civilian public schools are struggling to be supportive of military children and responsive to their needs during deployment. Chandra and colleagues (2010) found that school staff felt that some military children seem to be coping well with deployment but were aware of military children's anxiety related to parental absence, increased responsibilities at home, poor mental health of some nondeployed parents, and difficulty accessing mental health services. Chandra and colleagues also found that schools were a "stable place or sanctuary for students" (p. 222). However, school staff reported that they felt "overwhelmed" by a large proportion of military students' needs.

Reintegration

The reintegration period—the period of time immediately following the soldier's return to his or her family—is often a time of great joy and relief. The reintegration period, however, is also a time filled with new demands and stressors. During reintegration, returning soldiers must reestablish employment ties, resume household roles and responsibilities, and reacquaint themselves with spouses, children, and other family members. This stressful phase can adversely affect a military student's academic functioning (i.e., attendance, academic performance, ability to focus, and emotional energy to manage schoolwork) and mental health.

Research conducted during the Gulf War found high stress levels in military families. Similar to draft-era war contexts, military families often have little time to plan and mentally prepare for deployment. This lack of mental planning and psychological adjustment can negatively influence military family members' ability to manage stress beyond the deployment phase and into the reintegration phase. In a study of military families after the Gulf War, Peebles-Kleiger and Kleiger (1994) theorized that Operation Desert Storm's quick and unexpected deployments resulted in traumatic stress for military families and children during and after deployment. Moreover, reintegration stress was even more severe for military families whose loved one returned with post-traumatic stress disorder (PTSD; Burrell, Durand, & Fortado, 2003; Doyle & Peterson, 2005).

Managing reintegration stress. Despite these disruptions, reintegration researchers have recommended social programs and services to help military families manage stress. Deployments often result in long-term financial challenges and psychologically strain military families. Reintegration stress further compounds already existing stress. Some researchers have recommended that social programs that assist in family adjustment be developed. Doyle and Peterson (2005) assert the need for more programs and Army procedures to improve family communication, mitigate distress, and resolve crises during reintegration. They identify key elements of successful programming such as the early inclusion of families and communities in the planning for reentry and reintegration, normalization (non-medicalization of distress), easy access to behavioral health professionals, and the education of military families on social supports and mental health resources and benefits. In many cases, utilization of formal and informal social supports (e.g., mental health care) is critical for successful social, emotional, and psychological adjustment. However, level of access to and utilization of social supports vary by

military identification (i.e., active duty vs. Reservist) and proximity to military bases (i.e., living on base vs. living off base). Military children and left-behind parents in civilian communities, in comparison to those who live on military bases, depend on local community resources to address social, emotional, and psychological needs (i.e., counseling services for children at public schools in military impacted districts; Burrell et al., 2003).

War-related Trauma of the Returning Veteran Parent

Some reintegration periods involve the return of a veteran parent with war-related trauma. According to the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*; American Psychiatric Association, 2000), a person diagnosed with PTSD has experienced a traumatic event and exhibits symptoms from each of three symptom clusters: intrusive recollections (e.g., images, thoughts, distressing dreams, dissociative flashback episodes, hallucinations, etc.), avoidant/numbing symptoms (e.g., avoiding thoughts, feelings, activities, and people associated with trauma; diminished interest in significant activities; detachment; etc.), and hyper-arousal symptoms (e.g., difficulty sleeping, anger, concentrating, etc.). A person with PTSD exhibits symptoms for more than one month and the disturbance causes clinically significant distress or impairment in social, occupational, and other areas of functioning (American Psychiatric Association, 2000). Returning soldiers with PTSD often exhibit guilt feelings, emotional withdrawal, increased anger, elevated levels of aggression, as well as emotion numbing and arousal symptoms (Galovski & Lyons, 2004). These symptoms make it difficult or impossible for returning veterans to fully resume former roles of parent, partner, and contributor to household income (Solomon, 1988). Research across war contexts has found that families of veterans with war-related trauma illnesses are likely to be unstable. In addition, military children experience secondary traumatization and abuse and have negative mental health issues. These mental health issues in turn can potentially impact military children's academic functioning and behavioral issues in school.

Unstable family systems. Military children of veteran parents with war-related trauma are often positioned in an unstable family system. Research across war contexts has found that marital relationships, veteran parent-child relationships, and overall family functioning are disrupted when a returning veteran presents a trauma-related illness (Al-Turkait & Ohaeri, 2008; Goff, Crow, Reisbig, & Hamilton, 2007; Rosenheck & Fontana, 1998). In a study of Army families, Goff and colleagues (2007) found that trauma symptoms in soldiers significantly predicted poor relationship satisfaction for male veterans and their female partners. In a review of literature on secondary traumatization, Galovski and Lyons (2004) concluded that veterans' PTSD following exposure to combat violence adversely affected relationships with family members, including spouses.

Secondary traumatization. Studies across war contexts have found that military children move through a process of "secondary traumatization" or "intergenerational trauma transmission" (Baranowsky, Young, Johnson-Douglas, Williams-Keeler, & McCarrey, 1998; Motta, Joseph, Rose, Suozzi, & Leiderman, 1997;

Rosenheck, 1986; Rosenheck & Nathan, 1985; Scaturro & Hayman, 1992). In a review of literature, Baranowsky and colleagues (1998) described intergenerational trauma transmission as a process by which a returning veteran transfers personal war-related trauma to their children through obsessive retelling of war stories, all-consuming silence, reenacting war scenes, and expressions of guilt for being perpetrators of war violence. Similarly, in a case study of children of Vietnam veterans, Rosenheck and Nathan (1985) found that children of veterans with PTSD constantly “re-live” experiences with traumatized parents, experiencing in “fantasy” the same sequence of events. Subsequently, children may internalize a frightening experience of war far removed from their realities in an attempt to identify with a traumatized parent. In addition, veterans’ behavioral and emotional symptoms, such as anger and guilt, have been found in daily interactions with children. In a review of literature, Scaturro and Hayman (1992) posited that returning veterans with PTSD exhibited elevated feelings of fear and guilt during daily interactions with their children. Military children who develop trauma-related illnesses may impede cognitive development and as a result have low academic achievement. While these studies were conducted on children with Vietnam War veterans, nearly 34,000 soldiers, sailors, Marines, and airmen have been injured in the Iraq and Afghanistan wars, including traumatic brain injury and other trauma-related illnesses. It is expected military children of Iraq and Afghanistan veterans with war-related trauma illnesses are experiencing family disruption and distress (Cozza et al., 2010).

The Military Family in a Shifting Social Context: The National Guard and Reservist Families in Civilian Contexts

Researchers have examined military families’ shifting social environments. Since the transition to all-volunteer forces across the military branches, families of National Guard and Reservist service members have been an increasing presence in civilian contexts, including schools. Studies and conceptual papers have examined the unique experiences and stressors of National Guard and Reservist families, particularly their access to social supports and services in civilian communities and military installations. These studies have been primarily conducted in the current Iraq and Afghanistan war contexts. Overall, this body of literature suggests that children from National Guard and Reservist families have less access to social supports in civilian and military communities. These findings are relevant to educational researchers, since children from National Guard and Reservist families are likely to be attending civilian public schools.

Demographic shifts in the military. The five branches of the military have undergone major structural and personnel changes in the past 30 years. In 1973, the military branches began transitioning into all-volunteer forces (Drummet, Coleman, & Cable, 2003). Two resulting demographic shifts have occurred, and in turn, the social, emotional, and academic well-being of military children has emerged as a significant issue for both military and school leaders. One demographic shift is the growing proportion and number of military service members who have dependent family members. Chartrand and Siegel (2007) note that for the first time in history, “the number of military dependents (i.e., spouses and

children) now outnumbers the number of Active Duty and Reserve members of the military” (p. 1). According to the U.S. Department of Defense *2009 Demographics Report*, 43.7% of military service personnel (active and Reservist members) have family members, and there are more family members (1,864,427) than service members (1,365,571). The average number of children among all military families is 2.8. Also, 35.1% of active duty military members are married to civilian spouses and have children, with the largest proportion (31.4%) of active duty military dependents between birth and age 5 (U.S. Department of Defense, 2009).

Challenges. Reservist and National Guard families typically reside off base in civilian neighborhoods, enroll in civilian public schools, and have a unique set of experiences and demands that distinguish them from active duty military families (Bowen et al., 2003; Hoshmand & Hoshmand, 2007). Recent research indicates that Reservist families perceive less connectedness to military communities than full-time active duty military families living on military bases (Bowen et al., 2003; Hoshmand & Hoshmand, 2007). This type of variation in connectedness is influenced by different community influences for different types of military personnel (e.g., active duty, Reservist), who have families living in different circumstances (e.g., on base, off base). Bowen and colleagues (2003) conducted a study on on-base and off-base Air Force family adaptation. Results revealed that sense of community, which is defined as the degree to which family members feel positively attached to the Air Force as an organization, mediated the effect of unit support and informal community support on family adaptation, or the degree to which family members work “together as an effective team in dealing with presenting situations, evidencing commitment and cohesion, and successfully managing family responsibilities” (Bowen et al., 2003, p. 34). In addition, Bowen and colleagues found that families living on a U.S. or overseas base reported a greater sense of community than families living off base, while families who were at their current base assignments for a longer period reported lower levels of sense of community than families living at their current base assignments for a shorter period. From a community psychology perspective, Hoshmand and Hoshmand (2007) theorized that off-base military Reservists lack informal community and formal networks of military organizations that have been established for full-time active duty families who live on base. In general, these studies suggest that Reservist military families in civilian neighborhoods feel alienated from military organizations. Military-connected school researchers and educators could consider these issues while working with Reservist military students.

Reservist military families encounter structural limitations to healthy family adaptation, such as utilization of social supports and services. In a study of active duty families and Reservist families during Operation Desert Storm, Chartrand and Seigel (2007) found that Reservist families had less access to military mental health care than active duty military families. In addition, they often receive care from specialists who lack knowledge on military demands and stressors (Chartrand & Seigel, 2007). Hoshmand and Hoshmand (2007) posited that off-base military Reservist families lack informal and formal community social networks necessary for healthy adaptation to military demands and stressors. Hoshmand and Hoshmand also prescribed a practice model of community intervention that includes program

evaluation and community-based approaches undertaken by community psychologists, community partnerships, and school involvement for school-age children's adjustment and resilience building.

Recent studies have also shown that Reservist military families experience financial stress (Hoshmand & Hoshmand, 2007; MacDermid et al., 2005). Reservist spouses routinely seek employment in order to pay for child care and other social services found in the civilian community. Reservist spouses have higher unemployment rates when compared to civilian spouses. Other factors have adversely affected the marketability and career advancement of military spouses in the workforce, including employers not willing to hire highly mobile workers and the stress from needing to find child care. In a survey of the income and expenditure patterns of Reservist families living in civilian communities, MacDermid and colleagues (2005) found that one major concern among Reservist, off-base families is the lack of affordable health care. Due partly to long-term parental absences and lack of access to military social supports, these families spend substantially more than civilian families for child care and have less discretionary income than military families in military housing (MacDermid et al., 2005). Military-connected school researchers and educators should keep these financial issues in mind when addressing the academic and social needs of military children.

Integrating military families in local communities. Researchers have developed conceptual models and prescribed organizational strategies for developing social supports at the community level that assist in integrating military families into military and civilian communities (Drummet et al., 2003; Hoshmand & Hoshmand, 2003; Huebner et al., 2009; Huffman, Culterson, & Castro, 2008; Lincoln, Swift, & Shorteno-Fraser, 2008; Palmer, 2008). Huebner and colleagues (2009) suggested that formal military family support organizations and groups adopt a "building community capacity" perspective.

Hoshmand and Hoshmand (2007) similarly recommended community capacity building. Specific strategies for community capacity building include community needs assessments and designing services to support the resilience, community belonging, and service utilization of military families. Drummet and colleagues (2003) recommended that service providers such as family life educators be appropriately trained to address the needs of military families.

The unique role of schools. The 2008–2009 DoDEA Customer Satisfaction Survey of schools in international contexts suggests that U.S. public schools serving military students in civilian communities may want to adopt similar DoDEA practices and a school-community approach (DoDEA, 2009). Studies have found that supportive schools can be proactive settings that help buffer children against external risk factors such as family stress, community violence, war, and natural disasters (Astor, Benbenishty, & Estrada, 2009). The DoDEA Customer Satisfaction Survey reveals positive parent and student feedback on DoDEA schools, suggesting that DoDEA schools may help military children handle family demands and stressors. Results from survey evaluations of schools in international contexts have yielded positive student and parent perceptions of DoDEA schools. These results suggest that DoDEA schools could be protective settings for military children. Overall, 75% of parents and 72% of students in DoDEA schools gave

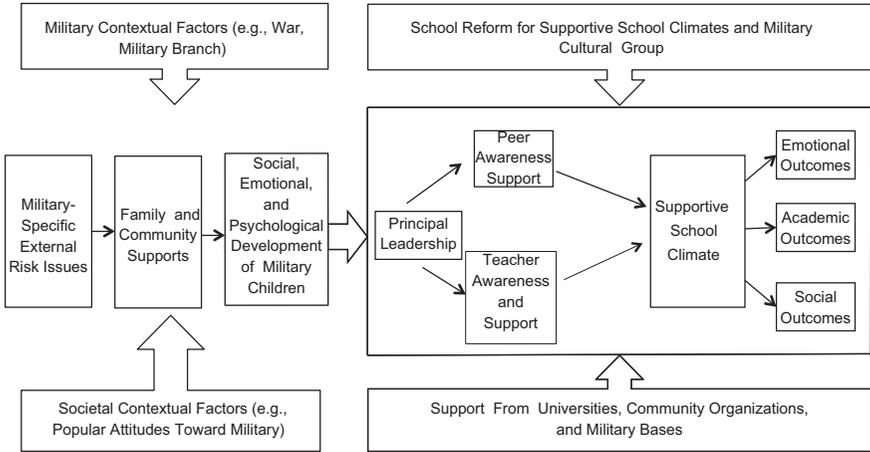


Figure 1. Current and future directions in educational research on military children.

positive ratings to educational experience, assessment, technology, student support, and communication in their schools. However, only 43% of DoDEA parents gave positive ratings to their U.S. civilian public schools. In the area of student support, 61% of parents and 69% of students were somewhat or very satisfied with academic help. In addition, 74% percent of parents and 73% of students gave positive ratings for how well their DoDEA schools welcomed new students, while 62% of students and 46% of parents rated their schools' counseling services positively. DoDEA schools were also rated highly for how well they communicate with parents and students' regarding student behavior, academic progress, school events, and activities.

Discussion and Recommendations for Future Research

The main purpose of this review was to synthesize research relevant to educational research, providing a coherent knowledge base on military children and military-connected schools. This knowledge base could encourage educational researchers to integrate military students' issues into future research and school reform agendas. An analysis of existing research generated research themes that can be categorized into four bodies of literature: mental health, child maltreatment, military-specific life events (deployment, reintegration, and war-related trauma), and the experiences of Reservist and National Guard families.

Current and future research on military-connected schools and students is depicted in Figure 1. The research included in this literature review focuses mainly on factors pertaining to experiences or risk factors of being in a military family, coping and supportive family dynamics, and the effects of these risk factors on the child's social and emotional development.

Through this review, we did not find empirical studies on the strategies that civilian public schools employ to respond to or support military families during times of war or deployment. Given the United States's long history with many wars, it is surprising that there is a lack of research examining the potential role of civilian schools in supporting military families and that military families are not included in school reform

agendas and national educational policies. The second part of the discussion section focuses more heavily on the right-hand portion of the heuristic Figure 1, which presents a conceptual way to link past research on military families and children to future educational school reform and school climate research.

*Main Findings and Future Directions Based on Reviewed
Current External Risk Factors*

A few major findings on the military-specific external risk issues emerge from this review. First, studies conducted during the current Iraq and Afghan wars provide strong evidence that students from military families are currently under a tremendous number of stressors stemming from the longest war in American history. Child maltreatment and mental health studies, for example, show negative psychological outcomes for both military parents and children in the Iraq and Afghanistan context. Second, the studies we reviewed in both the child maltreatment and mental health literatures have limited generalizability for multiple conceptual and methodological reasons. The lack of military and societal contextual factors included in early studies severely limits researchers' ability to apply these findings to military families over time. As seen on the left in Figure 1, more research can be done on the contextual factors influencing military-specific risk issues, family and community supports, and the social, emotional, and psychological development of military children.

Military contextual factors. Current studies in this review included very little on military and societal contextual factors that may account for differential outcomes. We found that military families' experiences likely vary greatly across historical and social contexts (e.g., war context, the military transition into an all-volunteer force) and demographically (e.g., Reservist vs. active duty status, rank). In particular, the five branches of the military have undergone major structural and personnel changes in the past 30 years. Most of these important changes over time and across contexts have not been accounted for in studies reviewed in this article, thus limiting interpretations and comparisons of findings across decades of research. Overall, when carefully examining the samples and dates of reviewed studies, there is a strong possibility that these historic, demographic, and structural variations in society and military families may account for variation of behavioral outcomes of military children over time.

The absence of military contextual factors applies to most early studies in the child maltreatment and mental health literatures reviewed in this article. Those studies often lacked data on demographic differences in sample and design, making it challenging to conclude which demographic groups of military children (i.e., military rank of parent, socioeconomic status, gender, military branch, race, etc.) are at highest risk for different forms of child maltreatment (i.e., physical abuse, sexual abuse, neglect, emotional abuse). They also rarely link to school settings. Given that schools and teachers are mandated reporters and represent most child abuse reporting (Kesner & Robinson, 2002), knowing how school districts with high concentrations of military families respond to higher rates of reported child maltreatment during times of war and multiple deployments would be valuable.

In the Iraq and Afghanistan war context, prolonged and repeated deployments may contribute to rising child maltreatment rates and potentially adverse effects on

academic and behavioral outcomes for schools with high proportions of military students. Epidemiological data on child maltreatment rates or prevalence in high concentration military-connected schools are important. Future research on the contextual factors of child maltreatment rates in military families should go beyond the methods used in most of the studies reviewed and include controlled studies and longitudinal approaches that measure academic variables and account for historical events such as participation in war, peacetime service, or service in a non-conflict zone. These types of studies and designs may potentially contribute to a clearer picture of the contributing factors to the effects of child maltreatment on schooling among military and nonmilitary families during times of conflict and peace. Due to these sample and design limitations, the studies conducted before the current war yield cautioned insight on generalizable risk factors of child maltreatment and mental health issues in military families

In addition, this review found that there are few studies on military families' experiences with reintegration. It is surprising that during the past decade only two studies, both exploratory and qualitative, have examined the experiences of reintegration on military children during the Iraq and Afghan wars. Unlike previous wars, troops are often deployed to Iraq and Afghanistan for prolonged and indefinite periods of time. At the same time, the reintegration process is often interrupted by unexpected and repeated deployments. Furthermore, military children and family members experience even more reintegration stress when veterans return with trauma. Recent studies have suggested that veteran trauma is related to increased rates of child maltreatment and negative mental health outcomes among military children and family members.

Finally, few studies have explored differential outcomes related to being in different branches of the military. More studies that explore how the branch within the military may impact a family and schooling are needed. In the current war context, the outcomes of students from families of Reservists and the National Guard, who largely attend urban and rural civilian public schools, have relevance for future educational reform research.

Societal contextual factors. As shown in Figure 1, an important context variable that has been neglected in past research is how the general public and public school educators view military families and students. Over the past decade, national polls show popular support for the Iraq and Afghanistan wars has been declining (Darley, 2005). In turn, the "hero status" of returning service members may be less evident for current military personnel and their families than those veterans returning from other wars such as the Persian Gulf War (Jensen & Shaw, 1993). Research reviewed in this article about the current war suggests that military families do not think the civilian public understands or supports them properly (Mmari et al., 2009). Studies from the Vietnam War suggest a lack of popularity and support from the American civilian public may affect the psychological adjustment of returning service members and their families as they transition into civilian roles. We could not find studies that linked the recruitment of families from neighborhoods and their reintegration to those neighborhoods. Future reintegration studies should consider including variables such as the communities where volunteers are recruited (e.g., high poverty and high violence communities), the possible influence of volunteers'

past experiences with community and family violence on war trauma, and if families return to communities that are higher in poverty with less community and school resources.

Moreover, no known studies have examined how families respond to returning parents with disabilities in the Iraq and Afghanistan war context. Studies reviewed from past wars provide evidence that military children and families may have significant mental health and financial issues as a result of a returning veteran parent with severe war trauma. Given the potential academic and mental health impacts on a student when his or her parent returns from war with a physical and mental trauma, these types of studies are critical.

Future Directions Focused on Academic and School Organizational Variables

The contextual factors on the left side of Figure 1—military contextual factors, societal contextual factors, military-specific external risk issues, family and community supports, social, emotional, and psychological development of military children—influence school contextual factors featured on the right side. The right side of Figure 1 proposes a conceptual model that mirrors current school reform research efforts and moves beyond research on external risk issues, family and community supports, and social, emotional, and psychological development of military children that has been conducted to date. Research on military-connected schools can examine how principal leadership, civilian peer awareness and support, teacher awareness and support, and a supportive school climate influences the academic, social, and social outcomes of military children. In addition to other school-level variables such as classroom instruction and school resources, a supportive school climate may have a positive impact on military students' emotional, academic, and social outcomes in schools. Decades of research have suggested that protective school climates are comprised of students who feel safe and connected to a school community and have caring relationships with peers and teachers. In addition, students have opportunities for meaningful participation and have easy access to academic support. Moreover, students feel welcomed and have a sense of shared ownership of the physical environment (Astor et al., 2009).

School reform. Researchers can define a school reform agenda for creating supportive school environments for military children. Researchers can examine school-level practices that improve school climate for military children. These practices may include integrating military culture into the core curriculum, celebrations of parents on active duty, schools with a military-centric focus, and school staff's increased knowledge of the unique challenges of military children. In addition, researchers can examine possible models of supportive military-friendly school climates and their response mechanisms, including effective military-connected schools and DoDEA schools.

Future educational research can also conceptualize a school reform agenda that integrates military families and children as a distinct cultural group with particular historical and cultural experiences. This agenda could initiate more normative studies on military children. Future studies could compare military children to their civilian peers. At the national and state levels, educational researchers need to address the need for representative epidemiological studies on military children

and the prevalence of negative social and academic outcomes and health risk behaviors. These data can inform future national and state educational policies as well as monitor outcomes over time to detect long-term success or growing needs.

One way to have sustainable normative data is to include military families as a demographic variable in existing longitudinal academic data collection systems. At the state level, educational reform researchers could encourage education policymakers to amend social studies academic standards to include the experiences of military families. This may be the best way to have comprehensive and state-wide data for policymakers and researchers to better understand and help military students. For researchers, recognition of military families as a cultural group can lead to the anonymous identification of populations of military children in large-scale data systems that track academic and social outcomes (e.g., statewide testing, school climate surveys). If included in state-level data collection systems, this demographic variable could greatly increase researchers' knowledge of military students in schools. Educators and researchers would have an accurate statewide and national picture on which schools have military students. Some states have already made modifications in this direction. For example, the California Healthy Kids Survey (CHKS) is the largest statewide survey of resiliency, protective factors, and risk behaviors across the nation. Since spring 2011, the CHKS began identifying military children in schools in addition to their social and health needs. These data can be used to match appropriate evidence-based programs and services to the specific social and emotional needs of military children in particular schools. Federal policies such as No Child Left Behind mandate the disaggregation of standardized test data to track the academic progress of subgroups (e.g., African Americans, students with disabilities) at the national, state, district, and school levels. Based on these data, researchers and schools can see how academic interventions match or mismatch with the needs of subgroups (e.g., a reading intervention program for a school with a high proportion of English language learners). Educational researchers and policymakers could use such databases to better understand the academic, social, and emotional status of military students as they compare with other students in the same schools and school districts.

Support from universities, community organizations, school districts, and military bases. Future educational research can focus on ways schools of education and universities educate teachers, principals, and pupil personnel on how to respond to the social, emotional, and academic needs of military children. Recently, the White House committed financial resources to military children's educational success through "improving the quality of the educational experience, by reducing the negative impacts of frequent relocations and absences, and by encouraging the healthy development of military children" (White House, 2011, p. 2). At present, there are few known teacher education or pupil personnel training programs that provide evidence-based training modules, courses, or materials on military children. Researchers could partner with programs that provide this education to assess the impact on military student outcomes. Since 2008, the DoDEA Educational Partnership Program has awarded \$97 million to military-connected school districts, which includes large-scale educational projects. These projects are still in process, and data are currently being collected to test program and intervention

effectiveness. However, few university education researchers are involved in this national effort.

Current school reform efforts are being conducted to address the transition issues of military children and the impact on academic functioning and behavioral issues. According to the DoDEA Educational Partnership website (<http://www.militaryk12partners.dodea.edu>), the average military child will move six to nine times during a K–12 school career, which is three times the average of civilian children. In addition to the stressors of military life (e.g., deployment), school transitions could present a multitude of unexplored stressors for military children. These high rates of mobility suggest that military students may have to contend with differences in state performance and academic standards and different foci in district or school educational mission and philosophy, delays in transporting school records, and course sequencing. In a new school, highly mobile military children may encounter barriers to involvement in extracurricular activities, redundant or missed entrance or exit testing, and unfulfilled graduation requirements. Other researchable mobility obstacles facing military students include kindergarten and first-grade entrance variations and the social challenges of establishing relationships with teachers and friendships with peers. Research could explore challenges mentioned by military family organizations such as the Military Child Education Coalition and the popular media. These could include inappropriate grade level and course placements, increased special education referrals and placements, dropping out of high school, and disciplinary problems. There are national organizations and researchers suggesting this would be an important future area of study (Chandra et al., 2009; Council of State Governments, 2008).

As a response to these problems at civilian public schools, the Interstate Compact on Educational Opportunity for Military Children is an agreement among 35 states to implement policy and procedural changes in public schools to facilitate transitions for children of active duty service members, severely injured or medically discharged veterans, or killed service members. The Compact's outlined school procedural changes include educational records and enrollment, placement and attendance, eligibility for enrollment, and graduation requirements. At present, there are no studies examining the awareness of the Compact among principals, teachers, and pupil service personnel; implementation at military-connected schools; and its current impact on the transitions of military children. Education policy researchers could examine the effectiveness of the Compact as well as traditional school supports (e.g., academic tutoring, response to intervention models, etc.) and existing military student programs (e.g., school district transition centers and military school liaison officers).

Finally, the mental health issues of military children reviewed in this article should prompt educational researchers to examine how district-level and community supports impact students and families at school. There is a need for research on ways school staff can identify aggregated groups of military children in schools or classes with few military students (to know where these groups are) and systematically monitor and respond to behavioral indicators of psychological stress. The awareness of school staff of school-based resources and mental health interventions (e.g., school mental health–provided therapeutic services), military nonprofit service organizations can build the capacity of a school to respond effectively to

the mental health needs of military children. Education researchers need to further examine the extent of school staff's awareness of mental health issues among military children.

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