

Submitted for review for publication to *AJO*

Associations between School Violence, Military-Connection, and Gang Membership in

California Secondary Schools

Joey Nuñez Estrada Jr.
College of Education
Department of Counseling and School Psychology
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1179
E-mail: jestrada@mail.sdsu.edu
Phone: (818) 968-8116

Tamika D. Gilreath
University of Southern California

Cathia Sanchez
San Diego State University

Ron A. Astor
University of Southern California

The authors have no conflict of interest to report.

Abstract

Recent studies have found that military-connected students confront many challenges such as secondary traumatization that may stem from a parent's deployment and frequent relocations. It is possible that multiple moves and deployments of family service members are associated with military-connected students' gang membership and involvement with school violence behaviors. In this study, a total of 13,484 students completed the core and military modules of the California Healthy Kids Survey, which includes a representative sample of 7th, 9th, and 11th graders from 23 secondary schools. Logistic regressions examined the odds of a student being a member of a gang given their grade, gender, race/ethnicity, school violence behaviors, military-connectedness, changes in schools, and familial deployments. Results indicate that of the nearly 8% of students sampled who reported being in a gang, those with a parent or sibling currently serving in the military reported a higher prevalence rate of gang membership than students with no military-connection. Students who reported being in fights or carrying a weapon to school are at least twice more likely to be a gang member than students reporting no fights or weapon carrying. Changing schools four or more times in the past five years and experiencing at least one familial deployment were also associated with an increased likelihood of gang membership. The findings of this study offer incentive to further explicate the gang and school violence experiences of military-connected students. This study also supports schools in understanding characteristics of the military-connected students and families they serve so they can implement appropriate interventions to curb gang and school violence behaviors.

Keywords: military-connected students, gang membership, deployments, changing schools

Associations between School Violence, Military-Connection, and Gang Membership in
California Secondary Schools

Due to the rise in U.S. military operations since 2001, there has been a need for further investigations studying the effects of parental deployment, frequent mobility, and other military-connected stressors on children in schools (Jacobson, 2013; Park, 2011). Currently, about 1.1 million children of active duty military service members are attending civilian public schools (Astor, De Pedro, Gilreath, Esqueda, & Benbenishty, 2013; De Pedro et al., 2011). In addition to this number, there are also about one million public school children that belong to Reserve or National Guard families (Astor et al., 2012). Although there are some studies addressing how military-connected students are affected by attending civilian public schools, the literature in this area is relatively limited (Astor, De Pedro, Gilreath, Esqueda, & Benbenishty, 2013; Esqueda, Astor, & De Pedro, 2012; Jacobson, 2013).

Recent studies have discovered that military-connected students face many unique military-related stressors, and as a result, additional challenges in schools (De Pedro et al., 2014). Repeated school changes, lost connections with friends, financial stress, parent deployment, parent reintegration and separation are just some of the additional challenges that many military-connected students face (De Pedro et al., 2014; Esqueda et al., 2012). These difficulties are often unaddressed and overlooked not only in public school settings, but also in scholarly literature (Esqueda et al., 2012; Mmari, Roche, Sudhinaraset, & Blum, 2009). Another unaddressed area is the association between military-connectedness and gang membership. When reviewing gang literature, the risk factors associated with gang membership are similar to military-related stressors. For instance, researchers have identified poverty, lack of belonging, alienation, community and school moves, parental incarceration, single parent home environments, and a

host of other marginalities that are linked to gang membership (Vigil, 1988; Vigil & Yun, 2002; Estrada, Hernandez, & Kim, in press). Some military-connected youth experience multiple marginality stressors due to the nature of the military lifestyle (e.g., multiple relocations, parental deployments), which may increase the likelihood of joining a gang.

On the surface, gangs and the military appear to share some cultural characteristics. Gangs and the military maintain unique styles of dress, use coded language, signs, and symbols, and use weapons to dominate and control territories. Gang values, which mirror that of the military, include power, respect, loyalty, commitment, protection, security, unity, and acceptance (Hasan, 1998). Identification with a gang or the military provides a sense of belonging to a family type system, where one is fully accepted and validated, has an accepted means of managing psychological distress, and gains a sense of personal cultural identity (Belitz & Valdez, 1997). Examining whether military-connected students are more attracted to gangs due to similar stressors and cultural experiences will fulfill a knowledge gap in the gang and military research. In this paper, we begin to tackle this knowledge gap by examining the association of multiple moves and deployments of family service members with military-connected students' gang affiliation and involvement with school violence, specifically physical fights and weapon carrying.

Although there has been some discussion on the involvement of military-connected students in gangs, this is one of the first studies examining the associations of gang membership and school violence behaviors in military-connected schools (Reed, Bell, & Edwards, 2011; 2014). This study explores: (1) the prevalence rates of gang membership and school violence behaviors in military-connected schools (2) how gang members in schools differ by gender, grade level, ethnicity, military-connectedness, multiple school moves, deployments, and school

violence behaviors (3) how military-connectedness, familial deployments, changes in schools, and school violence behaviors significantly affect the odds of gang membership for students in California secondary schools.

Literature Review

The Resilient Military Child

Throughout history, military children have exhibited resiliency despite the obstacles they face. A large-scale survey points out that military children are generally healthy, engaged in their schools and communities, perform well academically and are satisfied with life (Jeffreys & Leitzel, 2000; Smrekar, Guthrie, Owens, & Sims, 2001). Other studies have pointed out that compared to civilian children, military children are more resourceful, disciplined, adaptable, responsible, competitive and welcoming of challenges (Hall, 2008; Manning, Balson, & Xenakis, 1988). Though there is a significant amount of literature that points to the positives that come with being a military-connected student, in recent years, this literature has begun to vary as unprecedented lengthy and numerous deployments of service members have increased, posing greater challenges for military-connected students and families (American Psychological Association, Presidential Task Force on Military Deployment Services for Youth, Families, and Service Members, 2007; Astor, De Pedro, Gilreath, Esqueda, & Benbenishty, 2013; Chawla & Solis-Saunders, 2011; Davis, Blaschke, & Stafford, 2012; Park, 2011).

Disengagement and Isolation of Military-Connected Students During Parental Deployment

Increasing frequency and length of deployments of service members has had a significant impact on the military family, specifically on the children, as the number of behavioral and mental health visits has drastically increased since 2003 (“Department of Defense Reaches Out to Children of Soldiers,” 2009; Gorman, Eide & Histle-Gorman, 2010; Park, 2011). Children of

deployed service members also reported the length of deployment affected the seriousness of school, family, and mental health problems with a longer deployment resulting in greater problems (Cederbaum et al., 2013; Chandra et al., 2010; De Pedro, 2011). More specifically, Cederbaum and colleagues (2013) found that compared to nonmilitary-connected peers, adolescents who had a parent in the military were less likely to report positive affect. Furthermore, Chandra, Martin, Hawkins, and Richardson (2010) found that deployment-related behavior problems are affecting military-connected students' social outcomes, potentially leading to a reduction in school engagement and connectedness. In a qualitative study with 107 teens attending a summer camp for military-connected students, Huebner and Mancini (2005) found a trend of students reporting being socially withdrawn during parental deployments. This decrease in school engagement and connectedness among military-connected students provides insight concerning possible reasons why they may be more likely to join gangs. Previous research has established that gang members also have lower levels of school involvement and are more likely to be connected to antisocial peers (Jenson & Howard, 1998).

In addition to the decrease in school engagement and connectedness, gang members as well as military-connected students may feel alienated, isolated, or lack a sense of belonging in school (Finkel, Kelley, & Ashby, 2003; McVie, 2010; Mmari, 2009). Historically, when youth feel alienated or unaccepted by the dominant culture, there tends to be a reactive emergence of a subculture (Calabrese & Noboa, 1995). Rodriguez and Zayas (1990) highlight that disadvantaged status and discrimination, together with present deviant cultures in social environments tend to increase deviant peer connections. The findings of the Edinburgh Study of Youth Transitions and Crime revealed that at the age of 13, gang members reported greater feelings of alienation, marginalization, and exclusion from schools (McVie, 2010). This study also highlighted that

gang members were more likely than non-gang members to report having deviant peers and to be a part of a subculture that is commonly involved with delinquency (McVie, 2010). Many researchers have found that youth attraction to the gang subculture is nourished by its ability to supply them with acceptance and inclusion, needs that are not being met in their social environments (Burnett & Walz, 1994; William Gladden Foundation, 1992).

Similarly after interviewing eight gang members from one high school, Omizo, Omizo, and Honda (1997) found three groupings for the reasons why they decided to join a gang and one of these groups was that gangs offered them a sense of belonging. Gangs act like surrogate families to many gang members providing them with emotional affection, recognition, protection, support and a sense of belonging, something they may not be getting from their biological families or school peers (Omizo et al. 1997; Ruble & Turner, 2000; Walker-Barnes & Mason, 2001). Through interviews with a group of female gang members, Walker-Barnes and Mason (2001) learned that joining a gang offered youth opportunities to fit in. The idea that gangs provide members with a sense of belonging was also supported by the Greater Vancouver Gang Study, in which researchers found that youth are attracted to gangs because they offer members the support of peer groups (Gordon, 2000).

Astor et al. (2012) highlights that there is a need to address civilian schools' lack of sensitivity or awareness with the experiences of military life and culture especially now that such a significant amount of military children are attending these schools. Civilian staff and students' lack of awareness of military life and culture has been found to be a possible contributor to military-connected students' difficulties in making friends and building relationships (Mmari et al., 2009). In schools where there is unfamiliarity with the military experience, and only a couple of students are military-connected, parental deployment has been found to be an extremely

isolating experience (Chandra et al., 2010). Support from peer groups, sense of belonging and opportunities to fit in may, therefore, be attracting characteristics for military-connected students to join gangs due to their difficulties breaking into social networks and initiating relationships with peers as a result of their increased mobility.

Mobility Issues for Military-Connected Students

While the positive affect of mobility and relocations has been documented by several studies (Jensen et al., 1995; Merchant & Medway, 1987; Rutter, 1993; Weber & Weber, 2005), many of these studies were published during peacetime when the possibility for deployment was lower than it is today. The possibility for residential relocation is significantly higher for military-connected students compared to civilian students as approximately 33% of military individuals and families relocate every year, with students experiencing an average of nine military-related moves while growing up (Orthner, 2002; U.S. Army Community and Family Support Center, 2001). In addition to disrupting children's schoolwork and academic development, more recent research has found that frequent relocations were associated with significant increases in the likelihood of victimization and weapon carrying (Gilreath, Astor, Cederbaum, Atuel, & Benbenishty, 2013). Relocations are also disrupting military-connected students' social networks, contributing to their increased feelings of hopelessness and difficulties in initiating and maintaining deeper relationships with peers (Bradshaw, Sudhinaraset, Mmari, & Blum, 2010; Park, 2011; Vemberg, Ewell, Beert & Abwender, 1994; Wertsch, 1991).

Bradshaw et al., (2010) found that some students deal with discrimination because of the negative stereotypes that are connected with being a "military brat." This may add to military youths' difficulties breaking into social networks and making friends due to their frequent moves. Students who face frequent relocations report they are often on the margins of social

networks and have fewer friends, possibly increasing their likelihood of joining deviant peer groups, and as a result, increasing their involvement in delinquent behavior (Haynie & South, 2005; Vemberg, 1990). Congruently, residential mobility, frequent changing of schools, social disorganization, low bonding to school, and lack of social opportunities have been identified by several researchers as risk factors associated with gang involvement (Hawkins et al., 2000; Howell, 1998; Kallus, 2004). A synthesis of gang-related scholarship indicated that discrimination was another factor that influenced youth to find acceptance and a sense of belonging by joining gangs (Carlie, 2002). This gives some understanding for the additional attraction that military students may have towards gang membership considering the previously mentioned discrimination that they face as a result of the multiple moves that often come with being military-connected students. Sharkey, Shekhtmeyster, Chavez-Lopez, Norris, and Sass (2011) found that gangs often serve as a protective resource for those who join them, possibly giving incentive to military-connected students who have difficulties entering other social networks to use gang membership as a shield to protect them from discrimination.

To date, there is no empirical evidence examining these intersections and whether they prompt military-connected youth to join gangs, making this research fundamental in the quest to improve the experience of military youth in civilian schools. Given the acceptance and inclusion that gangs provide their members, and the feelings of isolation and alienation that military-connected youth often face, it is possible that gangs are being used as an avenue for military-connected students to find a sense of belonging and acceptance. Figure 1 describes the hypothesized intersections between gang membership and military-connectedness. This provides insight for the possible attraction that military-connected students have for joining a gang, considering their increased search for a sense of belonging.

Insert Figure 1 about here

Methods

The data used in this study is from the ongoing, large-scale California Healthy Kids Survey (CHKS) conducted by WestEd. The CHKS is a modular survey instrument developed by WestEd in collaboration with the California Department of Education. The CHKS consists of a core survey module that gathers demographic background data (e.g., grade, gender, and race/ethnicity) and inquires about students' health-related behaviors, tobacco use, alcohol use, drug use, violence behaviors, and school safety. A 39-item "military module" was developed by an interdisciplinary team of practitioners and faculty to identify the needs and experiences of military children. The military module was adopted by the California Department of Education, administered as part of the CHKS and was available for use by all districts in the state of California.

The data used in the present study is a subsample of the larger statewide sample and includes 13,484 7th, 9th, and 11th grade students from 23 military-connected schools that agreed to implement the military module and for whom valid data were available. Military-connected schools are public schools that have a high proportion of military children in them. Some federal definitions used to determine eligibility for federal funds and grants state that at least 4% of students at the school need to have a parent serving in the military for it to be considered a military-connected school. The schools in this convenience sample had a much higher percent of military-connected students (approximately 10% or more) since they are located near several

Navy and Marine military bases in southern California. The student participants completed both the core and military modules of the CHKS. Of the 39 items on the military module, 32 of the questions can be answered regardless of military-connection. Therefore, some students did not have a family member currently serving in the military or may have had a parent or sibling who is a military veteran. Parent/guardian consent was obtained for all participants. Data collection involved the student participants completing a paper-and-pencil survey during one class session. Student participation was voluntary, anonymous and confidential. The consent rate was 96.7% and the final completion rate of students present in class was 86.5%. Appropriate institutional, district and state-level permissions and reviews were completed and comply with the American Psychological Association's ethical standards.

Dependent Variable

Gang membership was assessed by a single question, which asked whether the respondent considered himself or herself to be a member of a gang. According to Curry and Decker (1998), "the most powerful measure of gang membership is self-nomination" (p. 6). Therefore, this study used the question, "Do you consider yourself a member of a gang?" to determine a participant's gang membership. Students who answered affirmatively were classified as gang members and those who responded negatively were classified as non-gang members.

Independent Variables

The demographic variables included grade (7th, 9th, or 11th), gender, and race/ethnicity. Race/ethnic categories consisted of Asian American/Pacific Islander, Black, White, Latino and mixed races/ethnicities. Fighting was assessed by whether students had been involved in a physical fight at school in the past year (yes vs. no). Weapon carrying was comprised of reporting that the student had brought a gun or knife to school in the past 12 months (yes vs. no).

Military connection characteristics included number of deployments of a family member overseas in the past 10 years (none vs. one or two or more), number of times the student changed schools due to family relocation in the past five years (zero to three vs. four or more), and whether the student had a family member currently serving in the military (no one, parent, or sibling).

Data Analysis

The Statistical Analysis System (SAS) version 9.4 was used in the analysis. Frequency distributions and cross-classification tables (χ^2 analysis) were performed to compare socio-demographic characteristics and key variables possibly related to gang membership, including, military connection and deployments. Logistic regression was employed to predict the probability of yes vs. no for being a member of a gang. All analyses controlled for students' clustering in schools.

Results

Descriptive Statistics

Table 1 illustrates that the overall sample was roughly evenly split by gender and grade levels. Nearly half the sample are Latino (49.5%), a little over a quarter are white (28.3%), and about 12% are mixed race. Asians and Blacks combined made up 10.3% of the total sample. When compared to the demographic makeup of the entire U.S. military or the entire state of California, the makeup of our student participants represents a slightly higher percentage of Latinos, a higher percentage of Mixed Race, a lower percentage of Whites and Blacks, and a somewhat similar rate of Asians. Roughly 19% of the sample had been in a physical fight in the past year, and 9.5% had brought a gun or knife to school in the past 12 months. Nearly 14% of the sample reported having either a parent or sibling currently serving active or reserve duty in

the military. Almost 5% of the respondents reported changing schools four or more times in the past five years and approximately 27% of the sample has experienced at least one deployment of a family member overseas in the past 10 years. The deployment figure includes both active or reserve duty, as well as veteran members of the military.

The overall prevalence rate of gang membership for the sample is roughly 8% (N=1,053). As shown in Table 1, males (10.3%) reported significantly higher rates of gang membership than females (5.4%) [χ^2 (1, N=1,053) = 140.84, $p < .0001$], and Latino (9.3%), Black (12.7%), and mixed race students (7.4%) reported higher rates than their White peers (5.4%) [χ^2 (4, N=1,053) = 57.93, $p < .0001$]. Of those who reported gang membership, 18.7% had been in a physical fight [χ^2 (1, N=1,053) = 1039.47, $p < .0001$] and 32.1% had brought a weapon to school in the past year [χ^2 (1, N=1,053) = 564.06, $p < .0001$]. About 7.6% of those who reported gang membership had no military connection, whereas 9.3% reported that they have a parent and 9% have a sibling currently serving in the military [χ^2 (2, N=1,053) = 9.10, $p < .01$]. Students with four or more moves in the past five years (13.3%), and those who have experienced a family member being deployed overseas at least once in the past 10 years (18.9%), were significantly more likely to report gang membership than those with three or less moves (7.5%) [χ^2 (1, N=1,053) = 39.19, $p < .0001$] and those who never experienced a deployment (6.4%) [χ^2 (2, N=1,053) = 26.05, $p < .0001$].

Insert Table 1 about here

Logistic Regression Results

Table 2 presents the results of the logistic regression analysis. Multivariate results indicate that students who reported being in a fight (OR=2.16, 95% CI=1.91-2.45) or bringing a weapon to school within the past year (OR=5.25, 95% CI=4.12-6.68) are at least twice more likely to report gang membership than students reporting no fights or weapon carrying. Military-connectedness was not a statistically significant associate of gang membership. However, changing schools four or more times in the past 5 years was associated with a 53% increase in the likelihood that a student reported being in a gang (OR=1.53, 95% CI=1.18-1.98). Additionally, compared to students who reported no familial deployments, experiencing one familial deployment increased the odds of gang membership by 44% (CI=1.04-1.98), while two or more family member deployments was associated with a 39% (CI=1.12-1.73) increase.

Insert Table 2 about here

Discussion

Despite the resiliency exhibited by military-connected students, the increase in frequency, length of deployments, and multiple relocations have posed immense difficulties for children and families (Chandra, Martin, Hawkins, & Richardson, 2010). Although studies have found that military children experience a reduction in school engagement, are more socially withdrawn, and have difficulty breaking into social networks due to parental deployments and frequent mobility (Cederbaum et al., 2013; Chandra et al. 2010; Huebner & Mancini, 2005), few inquiries have explored the intersections of gang membership and military-connection. Given that some military children and gang members experience comparable risk factors that

include losing a parent to deployment or incarceration, coping with multiple school moves, and feeling alienated because they lack a sense of belonging, exploring whether military-connected students are more likely to join a gang because of the similar stressors they confront is important. This study is one of the first to examine the prevalence rates of gang membership and school violence behaviors in military-connected schools. The study also evaluates how gang members in schools differ by gender, grade level, ethnicity, military-connectedness, multiple school moves, deployments, and school violence behaviors. Lastly, the present study includes data on how military-connectedness, familial deployments, changes in schools, and school violence behaviors significantly affect the odds of gang membership for students in California secondary schools.

The findings in this study suggest that gang membership in military-connected schools is roughly 8%, which is equivalent to the prevalent rates of gang membership in schools across the state of California (Estrada, Gilreath, Astor, & Benbenishty, 2014). In regards to race/ethnicity, the findings indicate that the odds of Black and Latino students reporting gang membership are nearly doubled when compared to White students. As Vigil's (1988; 2002) multiple marginality framework suggests, students of color often encounter multiple stressors including poverty, alienation, parental incarceration, single parent home environments, community and school failures, and a host of other marginalities that are linked to street socialization as a means of survival. Therefore, those students who have carried a weapon to school or been in a physical fight in the past year are at least twice more likely to identify as gang members than students reporting no fights or weapon carrying. Similar to the results of Sharkey et al. (2011), this finding suggests that safety appears to be an issue for some students and they may be turning to gangs as a means of protection. Weapon carrying and fighting are

activities often associated with gang membership and may reflect a youth's attempt at gaining respect, or their rejection of the dominant culture's socially acceptable behaviors (Vigil, 1987; 2010). Recent studies have found that when compared to nonmilitary students, those with a military-connected parent reported higher rates of weapon carrying (Gilreath, Astor, Cederbaum, Atuel, & Benbenishty, 2013; Reed, Bell, & Edwards, 2014). As Gilreath and colleagues suggest, having a military-connected family member may provide youth more access to weapons in the home. Due to the protective nature of the culture, military children may have a different mentality about protecting themselves than other students, which may lead them to carrying a weapon or fight in school. Future qualitative work exploring the actual reasons students are fighting and bringing weapons to school, and whether it is associated with their gang membership or military-connection, is warranted.

Although military-connectedness was not found to be a significant predictor of gang membership, some of the experiences associated with military families are. The findings indicate that experiencing at least one deployment is associated with an elevated risk for gang membership. Deployments tend to have a negative impact on military children, often resulting in a reduction in school engagement and possible social withdrawal (Cederbaum et al. 2013; Chandra, Martin, Hawkins, & Richardson, 2010; Huebner & Mancini, 2005). These deployment-related behavioral issues are similar to that of gang members who have been found to feel alienated, marginalized, and disconnected from schools (Finkel, Kelley, & Ashby, 2003; McVie, 2010; Mmari, 2009). It is possible that students who have experienced a deployment are attracted to or find refuge in gangs, which often act as a surrogate family providing emotional affection, protection, and support when a parent that is deployed is unable to do so. The findings also suggest that experiencing one deployment is slightly more strongly associated with gang

membership than experiencing two or more deployments. This may suggest that military-connected students experiencing only one deployment have a more traumatic psychological experience than students that get used to multiple deployments and learn to cope with their parent or sibling being away. The statistically significant difference is minute and future work should revisit this and determine whether there are substantial differences with each additional deployment experience.

Additionally, changing schools four or more times in the past five years also increases the likelihood of gang membership. It must be noted that the data did not allow for the differentiation between military-related changes in school and school changes unrelated to the military so the interpretation of the findings is limited. Nonetheless, frequent school relocations make it difficult to establish strong social support networks and deeply connected friendships, and also impact a student's school achievement (Bradshaw et al., 2010; Park, 2011). Given the feelings of isolation and alienation a military-connected student experiencing multiple moves confronts, it is possible they turn to gangs to fulfill the sense of belonging void. Like many marginalized, highly vulnerable youth, military-connected students may be running from the feelings of alienation to an outlet of acceptance and inclusion that is often supplied by gangs. More work is needed to examine the potential vulnerability military-connected children encounter as a result of deployments and multiple relocations.

Limitations

While this study was amongst the first to examine how military-connectedness, familial deployments, changes in schools, and school violence behaviors significantly affect the odds of gang membership for students in California secondary schools, there were noted limitations. First, the self-reported, cross-sectional design of the study precludes inference to causality.

Forthcoming work should go beyond just student perspectives and include perceptions of school personnel, parents, and siblings to study trends over time. Examining multiple perspectives and incorporating qualitative data to gather a deeper understanding of why students who experience a deployment and/or multiple changes in schools may be attracted to gangs would further the knowledge base in this area. Future potential inquiries should explore whether the psychologically challenging experiences of deployment and multiple moves match or differ from traumatic experiences children experience in other challenging situations (e.g., loss of a parent to death or incarceration, a divorce, foster placement).

Additionally, while this study explored the impact the number of deployments had on a student's likelihood of gang membership, it did not study how the length of deployments affects students and their likelihood of joining a gang. How the length of deployments may be impacting students and contributing to their exposure to risk factors correlated with an increased likelihood of gang membership is another area forthcoming investigations should examine. Richer data is also needed in order to examine the impact a deployment has on a child depending on whether it is a parent or sibling. Also, being able to differentiate between changes in schools that were military-related and changes in school unrelated to the military would improve the interpretation of the findings. The current data did not allow for this differentiation.

Next, the sample was gathered from a high military populated area, comprised of mostly U.S. Navy and Marine families in southern California; therefore, results cannot be generalized to military children from other countries, states, or branches. State and nationwide studies are needed. Furthermore, worldwide differences in military culture exist, so comparative analyses with countries like Israel that requires military participation, or with China that has nondemocratic less active military, would be interesting. Investigations that explore whether

living near a military base or in a military community can serve as a protective factor for military-connected students would also be valuable. Furthermore, the dependent variable of gang membership was measured with a single item. A more inclusive list of items that measure a student's degree and association of gang involvement, gang activities, gang peers, etc., should be utilized in future studies to provide a more detailed description of gang membership. Particular inquiries examining whether a student joins a gang for protection, safety, or a sense of belonging are examples of questions that could be posed to learn specific reasons behind one's affiliation. Assessing whether military-connection, number of deployments, and changes in schools are associated with other traditional risk indicators of gang membership, such as race/ethnicity, age, negative peer associations, impoverished communities, and dysfunctional family environments should be considered in future research. Prospective studies should also determine if the combined interactions of military-connection, race/ethnicity, age, and other risk and protective factors significantly increase or decrease the odds of gang membership. Lastly, given that impoverished marginalized youth are more likely to join gangs, it is important to consider socioeconomic status, yet these data lacked such a proxy. Future studies should measure and control for socioeconomic status.

Implications

A key contribution of this study is that it highlights the unintended consequences deployments and multiple changes in schools may have on military-connected students. Given the secondary traumatization one experiences as a result of multiple deployments and relocation transitions, which may include losing a sense of belonging and important social support networks, it is possible that military-connected students become a vulnerable group susceptible to gang involvement and related school violence behaviors. The main finding of this research—

that students who experience deployments and multiple changes in school are at a greater risk for gang membership—has several research and practice implications. First, schools should make a concerted effort in identifying military-connected students on campus, determine whether they have experienced deployments, and/or whether they have changed schools multiple times in the past five years. Knowing this information upfront can allow schools to implement support programs that provide military-connected students the sense of belonging and acceptance they yearn. Activities that improve engagement and meaningful participation in school may decrease the negative effects of deployments or multiple moves. For example, starting a military pride club where military-connected students can share their feelings and experiences with other military children, or creating ways to honor the history and contributions of military service members in school events or hallway displays provides a safe and supportive school climate where students feel accepted rather than marginalized (Astor et al., 2012). School support personnel (e.g., school counselors, school psychologists, school social workers) should be trained to use data-driven practical strategies to create a supportive school setting that makes all students feel welcome and connected (Astor et al., 2012). Astor and colleagues (2012) provide excellent examples of strategies already being used by several military-connected public schools.

References

- American Psychological Association, Presidential Task Force on Military Deployment Services for Youth, Families, and Service Members. (2007). *The psychological needs of U.S. military service members and their families: A preliminary report*. Washington, DC: American Psychological Association.
- Astor, R. A., De Pedro, K. T., Gilreath, T. D., Esqueda, M. C., & Benbenishty, R. (2013). The promotional role of school and community contexts for military students. *Clinical Child and Family Psychology Review*, 1-12.
- Astor, R.A., Jacobson, L., Benbenishty, R., Atuel, H., Gilreath, T., Wong, M., De Pedro, K., Esqueda, M.C., & Estrada, J.N. (2012). *The school administrator's guide for supporting students from military families*. New York, NY: Teachers College Press.
- Astor, R. A., Jacobson, L., Benbenishty, R., Pineda, D., Atuel, H.R., Gilreath, T.D., Wong, M., De Pedro, K.T., Esqueda, M.C., & Estrada, J.N. (2012). *The pupil personnel guide for supporting students from military families*. New York: Teachers College Press.
- Belitz, J., & Valdez, D.M. (1997). A sociocultural context for understanding gang involvement among Mexican-American male youth. In J.G. Garcia & M.C. Zea (Eds), *Psychological interventions and research with Latino populations*, (pp. 56-72). Boston: Allyn and Bacon.
- Bradshaw, C., Sudhinaraset, M., Mmari, K., & Blum, R. (2010). School transitions among military adolescents: A qualitative study of stress and coping. *School Psychology Review*, 39 (1), 84-105.
- Burnett, G. & Walz, G. (1994). Gangs in the schools. *ERIC Digest* Vol. ED 37215. Greensboro, NC: University of North Carolina.

- Calabrese, R. L., & Noboa, J. (1995). The choice for gang membership by Mexican-American adolescents. *The High School Journal*, 78(4), 226-235.
- Carlie, M.K. (2002). Into the abyss: A personal journey into the world of street gangs. Retrieved September 28, 2013 from http://faculty.missouristate.edu/m/MichaelCarlie/site_map.htm
- Cederbaum, J., Gilreath, T. D., Benbenishty, R., Astor, R. A., Pineda, D., De Pedro, K. T., Esqueda, M. C., Atuel, H. (2013). Well-being and suicidal ideation of secondary school students from military families. *Journal of Adolescent Health*, 54(6), 672-677.
- Chandra, A., Lara-Cinisomo, S., Jaycox, L. H., Tanielian, T., Burns, R. M., Ruder, T., & Han, B. (2010). Children on the homefront: The experience of children from military families. *Pediatrics*, 125(1), 16-25.
- Chandra, A., Martin, L. T., Hawkins, S. A., & Richardson, A. (2010). The impact of parental deployment on child social and emotional functioning: Perspectives of school staff. *Journal of Adolescent Health*, 46(3), 218-223.
- Chawla N., & Solinas-Saunders, M. Supporting military parent and child adjustment to deployments and separations with filial therapy. *The American Journal of Family Therapy*, 39(3), 179-192.
- Davis, B.E., Blaschke, G.S., & Stafford, E.M. (2012). Military children, families, and communities: supporting those who serve. *Pediatrics*, 129 (S3), S3-S10. doi: 10.1542/peds.2010-3797c
- Department of Defense reaches out to children of soldiers. (2009, October 22). *U.S. Medicine*. Retrieved from <http://www.usmedicine.com/articles/Department-of-Defense-Reaches-Out-to-Children-of-Soldiers.html>

De Pedro, K., Astor, R.A., Benbenishty, R, Estrada, J.N., Smith, G.A., & Esqueda, M.C. (2011).

The children of military service members: Challenges, resources, and future educational research. *Review of Educational Research, 81*(4), 566-618.

De Pedro, K.T., Atuel, H., Esqueda, M. C., Malchi, K., Benbenishty, R., & Astor, R. A. (2014).

Responding to the needs of military students and military-connected schools: Perceptions and actions of school administrators. *Children & Schools, 36*(1), e18-e25.

Esqueda, M. C., Astor, R. A., & De Pedro, K. T. (2012). A call to duty: Educational policy and

school reform addressing the needs of children from military families. *Educational Researcher, 41*(2), 65-70.

Estrada, J. N., Gilreath, T. D., Astor, R. A., & Benbenishty, R. (2014). A statewide study of gang

membership and violent behaviors in California secondary schools. *Youth & Society*.

Epub ahead of print April 3, 2014.

Estrada, J. N., Hernandez, R., & Kim, S. (in press). Considering definitional issues, cultural

components, and the impact of trauma when counseling vulnerable youth susceptible to gang-involvement. In J.G. Ponterotto, J.M. Casas, & L.A. Suzuki (Eds.) *Handbook of multicultural counseling* (4th ed.). Thousand Oaks, CA: Sage Publications.

Finkel, L.B., Kelley, M.L., & Ashby, J. (2003). Geographic mobility, family, and maternal

variables as related to the psychosocial adjustment of military children. *Military Medicine, 168*, 1019-1024.

Gilreath, T., Astor, R., Cederbaum, J., Atuel, H., Benbenishty, R. (2013). Prevalence and

correlates of victimization and weapon carrying among military- and nonmilitary-connected youth in Southern California. *Preventative Medicine, 60*, 21-26.

- Gordon, R. (2000). Criminal business organizations, street gangs and 'wanna-be' groups: A Vancouver perspective. *Canadian Journal of Criminology*, 42(1), 39-60.
- Gorman, H., Eide, M., & Hisle-Gorman, E. (2010). Wartime military deployment and increased pediatric mental and behavioral health complaints. *Pediatrics*, 126, 1058-1066.
- Hall, L. K. (2008). *Counseling military families: What mental health professionals need to know*. New York, NY: Routledge.
- Hasan, H. A. (1998). Understanding the gang culture and how it relates to society and school. In: Park Hyun-Sook and Meyer Luanna et al. (Ed), *Making friends: The influences of culture and development* (pp. 263-283). Baltimore, MD: Paul H. Brookes.
- Hawkins, J. D., Herrenkohl, T. I., Farrington, D. P., Brewer, D., Catalano, R. F., Harachi, T. W., & Cothorn, L. (2000, April). *Predictors of youth violence*. Washington DC: Juvenile Justice Bulletin, Office of Justice Programs, U.S. Department of Justice.
- Haynie, D. L., & South, S. J. (2005). Residential mobility and adolescent violence. *Social Forces*, 84, 363-376.
- Howell, J.C. (1998, August). *Youth gangs: An overview*. Washington DC: Juvenile Justice Bulletin, Office of Justice Programs, U.S. Department of Justice.
- Huebner, A. J., & Mancini, J. A. (June, 2005). *Adjustment among adolescents in military families when a parent is deployed: A final report submitted to the Military Family Research Institute and the Department of Defense Quality of Life Office*. Falls Church, VA: Virginia Tech, Department of Human Development.
- Jacobson, L. (2013). Addressing the High Costs of Student Mobility. *Harvard Education Letter*, 29(2), 4-6.

- Jeffreys, D. J., & Leitzel, J. D. (2000). The strengths and vulnerabilities of adolescents in military families. In J. A. Martin, L. N. Rosen, & L. R. Sparacino (Eds.), *The military family: A practice guide for human service providers* (pp. 225–240). Westport, CT: Praeger.
- Jensen, P. S., Watanabe, H. K., Richters, J. E., Cortes, R., Roper, M., & Liu, S. (1995). Prevalence of mental disorder in military children and adolescents: Findings from a two-stage community survey. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*(11), 1514–1524.
- Jenson, J. M., & Howard, M. O. (1998). Correlates of gang involvement among juvenile probationers. *Journal of Gang Research, 5*(2), 7–15.
- Kallus, L. (2004). Because no one ever asked: Understanding youth gangs as a primary step in violence prevention. In E. R. Gerler (Ed.), *Handbook of school violence* (pp. 215-236). New York, NY: Haworth Press.
- Manning, D. T., Balson, P. M., & Xenakis, S. N. (1988). Prevalence of type A behavior in American combat soldiers and their children. *Military Medicine, 153*, 358–360.
- McVie, S. (2010). Gang Membership and Knife Carrying: Findings from the Edinburgh Study of Youth Transitions and Crime. Edinburgh, Sco: The Scottish Centre for Crime and Justice Research.
- Merchant, K., & Medway, E. (1987). Adjustment and achievement associated with mobility in military families. *Psychology in the Schools, 24*, 289-294.
- Mmari, K., Roche, K. M., Sudhinaraset, M., & Blum, R. (2009). When a Parent Goes Off to War Exploring the Issues Faced by Adolescents and Their Families. *Youth & Society, 40*(4), 455-475.

Omizo, M. M., Omizo, S. A., & Honda, M. R. (1997). A phenomenological study with youth gang members: Results and implications for school counselors. *Professional School Counseling, 1*(1), 39-42.

Orthner, D. (2002). *Relocation adjustment among army civilian spouses. Survey report.* Retrieved August 5, 2013, from <http://www.armymwr.com/corporate/operations/planning/surveys.asp>

Park, N. (2011). Military Children and Families. *American Psychologist, 66*(1), 65-72.

Reed, S. C., Bell, J. F., & Edwards, T. C. (2011). Adolescent well-being in Washington state military families. *American Journal of Public Health, 101*, 1676–1682.

Reed, S. C., Bell, J. F., & Edwards, T. C. (2014). Weapon carrying, physical fighting, and gang membership among youth in Washington state military families. *Maternal and Child Health Journal, 18*(8), 1863-1872.

Rodriguez, O., & Zayas, L. H. (1990). Hispanic adolescents and antisocial behavior: Sociocultural factors and treatment implications. In A. R. Stiffman & L.E. Davis (Eds.), *Ethnic Issues in Adolescent Mental Health* (pp. 147-161). Thousand Oaks, CA: Sage Publications.

Ruble, N. M., & Turner, W. L. (2000). A systemic analysis of the dynamics and organization of urban street gangs. *American Journal of Family Therapy, 28*(2), 117-132.

Rutter, M. (1993). Resilience: Some conceptual considerations. *Journal of Adolescent Health, 14*, 626-631.

Sharkey, J. D., Shekhtmeyster, Z., Chavez-Lopez, L., Norris, E., & Saas, L. (2011). The protective influence of gangs: Can schools compensate? *Aggression and Behavior, 16*, 45-54.

- Smrekar, C., Guthrie, J. W., Owens, D. E. & Sims, P. G. (2001, September). *March through excellence: School success and minority student achievement in Department of Defense schools*. A report to the National Education Goals Panel. Nashville, TN: Vanderbilt University, Peabody Center for Education Policy.
- U.S. Army Community and Family Support Center. (2001, Spring). *Impact of PCS moves on high school students in Army families*. Retrieved on September 23, 2007, from http://www.annymwr.com/corporate/docs/planning/S_AFIVPSCSchoolsSummary.pdf
- Vemberg, E. M. (1990). Experiences with peers following relocation during early adolescence. *American Journal of Orthopsychiatry*, 60, 466-472.
- Vemberg, E. M., Ewell, K. K., Beery, S. H., & Abwender, D. A. (1994). Sophistication of adolescents' interpersonal negotiation strategies and friendship formation after relocation: A naturally occurring experiment. *Journal of Research on Adolescence*, 4, 5-19.
- Vigil, J. D. (1987). Street socialization, locura behavior, and violence among Chicano gang members. In J. Kraus & A. Morales (Eds.). *Violence and homicide in Hispanic communities* (pp.231-241). Washington, DC: National Institute of Mental Health.
- Vigil, J. D. (1988). *Barrio gangs: Street life and identity in Southern California*. Austin, TX: University of Texas Press.
- Vigil, J. D. (2010). *Gang redux: A balanced anti-gang strategy*. Long Grove, IL: Waveland Press.
- Vigil, J. D., & Yun, S. C. (2002). A cross-cultural framework to understand gangs: Multiple marginality and Los Angeles. In C. R. Huff (Ed.), *Gangs in America* (3rd ed., pp. 161–174). Thousand Oaks, CA: Sage.

- Walker-Barnes, C. J., & Mason, C. A. (2001). Perceptions of risk factors for female gang involvement among African American and Hispanic women. *Youth and Society, 32*(3), 303-336.
- Weber, E. G., & Weber, D. K. (2005). Geographic relocation frequency, resilience, and military adolescent behavior. *Military Medicine, 170*(7), 638–642.
- Wertsch, M. E. (1991). *Military brats: Legacies of childhood inside the fortress*. St. Louis, MO: Brightwell.
- William Gladden Foundation. (1992). *Juvenile gangs*. York, PA: Author. (ED361609).

Figure 1. Conceptual Model Describing Intersections of Gang Membership and Military-Connectedness.

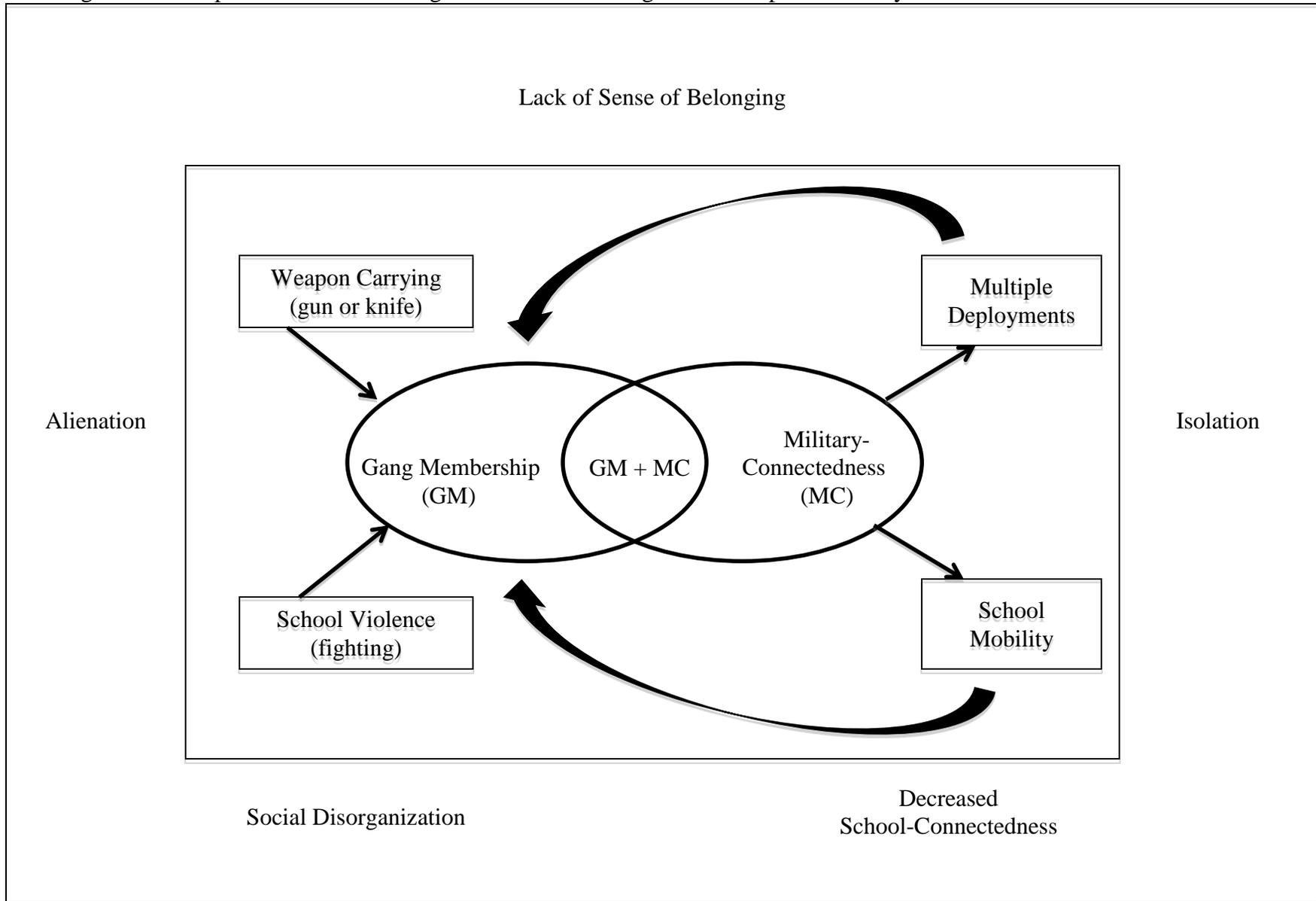


Table 1. Percentages of Gang Members by Demographic and Military-Connected Variables in the 2011 California Healthy Kids Survey (n=13,484).

Variable	Total N (%)	Gang Membership (N=1,053) % Yes
Gender ($\chi^2 = 140.84$)**		
Female	7,277 (51.9)	5.4
Male	6,747 (48.1)	10.3
Grade		
7 th	4,494 (32.7)	7.6
9 th	4,858 (35.3)	7.3
11 th	4,405 (32.0)	7.7
Race/Ethnicity ($\chi^2 = 57.93$)**		
White	3,929 (28.3)	5.4
Asian/AI/HI/AN	1,010 (7.3)	5.3
Black	419 (3.0)	12.7
Latino	6,887 (49.5)	9.3
Mixed Race	1,651 (11.9)	7.4
Physical fight ($\chi^2 = 1039.47$)**		
No	11,054 (80.7)	5.2
Yes	2,639 (19.3)	18.7
Carried a weapon ($\chi^2 = 564.06$)**		
No	12,443 (90.5)	5.4
Yes	1,303 (9.5)	32.1
Military-connection ($\chi^2 = 9.10$)*		
None	12,385 (86.6)	7.6
Parent	1,305 (9.1)	9.3
Sibling	609 (4.3)	9.0
Changed school in past 5 years ($\chi^2 = 39.19$)**		
None to three	13,629 (95.2)	7.5
Four or more moves	670 (4.7)	13.3
Deployments ($\chi^2 = 26.05$)**		
None	7,725 (72.8)	6.4
One	1,018 (9.6)	9.8
Two or more	1,874 (17.6)	9.1

Note: Denotes significant χ^2 for differences; *p<0.01 and **p<.0001.

Table 2. Logistic Regression of Gang Membership in 2011 California Healthy Kids Survey (n=10,005).

Predictors	Gang Membership Odds Ratio (95% CI)
Grade	
7 th (reference)	1.00
9 th	1.07 (0.85-1.37)
11 th	1.21 (0.91-1.61)
Gender	
Female (reference)	1.00
Male	1.46 (1.22-1.74)*
Race/Ethnicity	
White (reference)	1.00
Asian/AI/AN/PI/HI	0.91 (0.63-1.31)
Black	1.96 (1.21-3.16)*
Latino	1.57 (1.25-1.97)*
Mixed	1.12 (0.84-1.50)
Physical fight at school	
No (reference)	1.00
Yes	2.16 (1.91-2.45)*
Carried weapon to school	
No (reference)	1.00
Yes	5.25 (4.12-6.68)*
Military-connection	
None (reference)	1.00
Parent	0.81 (0.60-1.10)
Sibling	1.10 (0.76-1.59)
Changed school in past 5 years	
None to three	1.00
Four or more	1.53 (1.18-1.98)*
Deployments	
None	1.00
One	1.44 (1.04-1.98)*
Two or more	1.39 (1.12-1.73)*

Note: *Denotes significant odds ratio (p < .05).