

Children After War: A Novel Approach to Promoting Resilience Through Music

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Increasing research is promoting the need for innovative, holistic, and sustainable ways to foster resiliency and recovery in war-affected children. The Shropshire Music Foundation seeks to promote a culture of peace and unity, as well as development and recovery for children living in postconflict Kosovo. The current study evaluated the effectiveness of this program, by independent investigators, in promoting resiliency and diminishing distress in program participants. The study evaluated groups of students with no program participation, new program participants, 12 months of participation, and program graduates ($N = 74$). Overall, children who participated in the program at least 1 year evidenced fewer affective and cognitive disturbances than children recently enrolled. Furthermore, the relationship between posttraumatic stress disorder (PTSD) symptomology and conduct problems was mediated by attention problems.

Keywords: children, war, trauma, resiliency, music education, PTSD

As researchers and practitioners from various fields continue to address the damage caused by armed conflicts, there is a need for developing innovative and dynamic approaches to healing and recovery in affected communities. This article will examine one such innovative approach to fostering recovery in children affected by conflict in Kosovo. After providing a brief background on the armed conflict in this region, we will examine some of the literature on the psychological consequences of war and trauma on individuals and communities, specifically on children. Rationale for the need of a holistic approach to recovery will then precede the purpose of the current study, which is to examine the effects of a community-based music education program on cognitive and behavioral functioning in Kosovo youth.

The region today known as Kosovo has a long history of ethnic and social tensions, outside rule, and war. Centrally located in the Balkans and bordered by Albania, Montenegro, Serbia, and Macedonia, the ethnically Albanian-dominated region of Kosovo had been under Serbian rule since the Middle Ages. In 1991, Kosovo Albanians (Kosovar) declared full independence of Serbian rule and launched an insurgence to assert their claim. The Serbian military began a violent campaign in 1998 to control uprisings,

resulting in massacre and the ejection of approximately 800,000 Kosovar from the country. International peacekeepers forced a cease-fire and expulsion of Serbian military forces in 1999. Though NATO and the United Nations became involved at this point, Kosovo independence was not officially recognized until 2008. During the intervening period, the United Nations Interim Administration Mission in Kosovo (UNMIK) oversaw the governance of the Republic of Kosovo (for a more extensive historical overview, see [Kubo, 2010](#) or the online Central Intelligence Agency [CIA] World Factbook page for Kosovo). Today, the country is still establishing itself as an independent republic and seeking to heal the wounds of war and hatred. Though many Kosovo Albanians outmigrated as refugees, many others are currently fighting a different type of battle: rebuilding ethnic relationships, reintegrating uprooted people, and establishing unified societal structures.

The Lasting Effects of War

The Republic of Kosovo was not alone in their struggle for independence and human rights during this time, and the crippling effects of war were felt throughout the Balkan region. Croatia and Bosnia-Herzegovina also endured human rights violations, widespread violence, and diaspora of disempowered ethnic groups ([Central Intelligence Agency World Factbook, 2012; Kubo, 2010](#)). In a study of over 3,000 participants who were living in the Balkan region during the 1990s, known as the Third Balkan Wars, [Priebe et al. \(2010\)](#) found that individuals experienced an average of 4.7 events labeled as potentially traumatic during the wars. The most frequently reported events included being expelled from home under threat, lack of shelter, shelling or bombardment, and witnessing murder or death. Results of this study also showed that experiences of human rights violations significantly increased the likelihood of participants to experience symptoms of major de-

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pressive disorder (MDD) and posttraumatic stress disorder (PTSD), even 8 years following events (Priebe et al., 2010).

The Impact of War on the Mental Health of Children

It has been well documented that war particularly affects children (Morina, von Lersner, & Prigerson, 2011; United Nations Department for Policy Coordination and Sustainable Development, 1996; Wexler, Branski, & Kerem, 2006). Children of war are inherently exposed to significant trauma, because they are physically and psychologically more vulnerable to damage, both acute and persistent (Pine, Costello, & Masten, 2005; Wexler et al., 2006). Because of widespread devastation of economic, social, and educational systems, these children are in need of newly formed or revitalized structures to provide support and security (Roberts, Damundu, Lomoro, & Sondorp, 2009). The ability of a child to recover following a traumatic event, even if indirectly experienced, is dependent upon reactions of parents and role models within his or her social support network (Jones, 2008; Pine et al., 2005; Wexler et al., 2006). However, conflict and societal chaos prolonged over a period of time can cause problems other than trauma, such as identity confusion (United Nations Department for Policy Coordination and Sustainable Development, 1996), depression and grief (Morina et al., 2011), and disruptive behavior (Pine et al., 2005). These outcomes can affect the individual for many years, even into adulthood (Morina et al., 2011; Priebe et al., 2010).

Other Consequences of War and Trauma

In a review of literature on children affected by various traumatic life events, Amsworth and Holaday (1993) noted further effects of traumatic life events outside of PTSD. For example, in an effort of self-preservation, children may be prone to exerting extreme mental effort to repress painful memories or images, avoid thinking about the event, and avoid external reminders of the event. This exertion has potential to impair normal cognitive and memory development (Amsworth & Holaday, 1993). In addition, communication and verbalization skills have been found to be below expected developmental benchmarks in traumatized children (Perry, Doran, & Wells, 1983). Affective disruption was also examined across multiple studies and the evidence suggests, depending on environmental factors and individual predispositions, children tend to react either hyperresponsively or hyporesponsively (Amsworth & Holaday, 1993). This means that children tend toward either extreme internalization and withdrawal, or the opposite extreme of aggressive and maladaptive behaviors.

Through a study unrelated to trauma, children in Kosovo appeared to stand out as having more behavioral issues than other children. The Rescorla et al. (2012) cross-societal study compared parental and teacher/caregiver-reported behavioral problems from 15 different countries. It was found that children in Kosovo had significantly higher scores than children in other countries on a Total Problems scale. This measure assessed behaviors and tendencies ranging from somatic complaints and aggression, to attention problems and emotional reactivity. Kosovar children were also found to have significantly higher scores than almost all other societies assessed on a scale that examined externalizing of emotional disturbances (Rescorla et al., 2012). Data gathered from

Kosovo also demonstrated a significantly higher mean on a scale measuring somatic complaints, as well as the Diagnostic and Statistical Manual (DSM)-Pervasive Development Problems scale (Rescorla et al., 2012).

Misconceptions About Resiliency in Children

Despite the inherent vulnerability of children, and consistent research demonstrating that heightened vulnerability is commonly associated with trauma, other research also demonstrates the incredible resiliency children are capable of demonstrating in the face of world-shattering events (Blattman & Annan, 2008; Masten & Coatsworth, 1998). Borja and Callahan (2009) theorized that in the final stage of processing a traumatic event, the individual is able to work through denial and anger and express feelings, as well as grieve losses. Here, individuals take responsibility for their recovery and are able to accept and integrate their experiences. This outcome captures the return to pretrauma levels of functioning and/or new, positive changes in their life. In fact, some researchers of adult survivors of trauma have proposed that the typical outcome of trauma is recovery, meaning a more coherent sense of self, closer relationships, increased ability to self-protect and prevent abusive relationships, and a more integrated philosophy of life (Christopher, 2004; Tedeschi & Calhoun, 1995; Thompson, 2000). At least half of those exposed to traumatic stress report some growth, reflecting improvements in relationships, spirituality, or newfound personal strength (Tedeschi & Calhoun, 1995; Thompson, 2000). Unfortunately, much of this research provides an incomplete consideration of whether the index trauma occurred in childhood or adulthood and also whether associated recovery or growth reported by survivors of childhood trauma was temporally near to the event (i.e., still in childhood) or emergent later, in adulthood.

What is clear is that recovery and resilience of children following traumatic life events depends heavily on receiving support and positive modeling from parents and community groups. The death or disappearance of one or both parents, or the breakdown of societal structures, can leave children and youth with little guidance and lacking key role models, often resulting in identity confusion, disruptive or aggressive behavior, and withdrawal among other maladaptive behaviors (Morina et al., 2011; United Nations Department for Policy Coordination and Sustainable Development, 1996). Youth tend to model behaviors and externalize feelings of distress and fear observed in parents and adult caretakers (United Nations Department for Policy Coordination and Sustainable Development, 1996; Wexler et al., 2006). In addition, traditional family dynamics are often shattered by the death, traumatization, or incapacitation of parents and guardians. There has been well-documented research on the effects of shifting roles within family units on refugee youth and internally displaced (IDP) youth. Children and adolescents may take on nontraditional roles in the family because of the effects of war and conflict, including caring for younger siblings and taking on employment to provide for family members (Nygren, 2003; United Nations Department for Policy Coordination and Sustainable Development, 1996). These shifting roles can create a discordant atmosphere as parents and children learn how to interact with each other in accordance with new expectations and social

structures (Hinton, Rasmussen, Nou, Pollack, & Good, 2009; Hurt et al., 2002; Nygren, 2003; United Nations Department for Policy Coordination and Sustainable Development 1996).

The Need for Competent, Holistic Approaches

As Jones (2008) asserted, attempts at fostering recovery in children and families of war should carry a strong focus on familial and community relationships. Countries that have endured prolonged war and violence may not have structures in place for mental health needs until fighting has ceased. Even postconflict, mental health care tends to be set up by nongovernmental organizations (NGOs), which typically prescribe to Western mental health care practices and theories (Jones, 2008; Nygren, 2003; Roberts et al., 2009; World Health Organization, 2012).

The Western models of addressing trauma and posttrauma consequences focus on individualized therapy and counseling plans, processing events, analyzing reactions, and deciphering potential meanings attached to these events and reactions. Although this methodology may be effective in Western cultures, it is not necessarily translatable in non-Western societies and developing countries. Rather, the World Health Organization (2012) suggests a holistic and integrated approach to postconflict mental health care, including culturally relevant approaches, training of local practitioners, and focusing on familial and community recovery over singling out individuals. This approach aims to create sustainable localized mental health care to remain in place when foreign aid has withdrawn (World Health Organization, 2012).

Jones (2008) proposes numerous factors need to be considered when designing and implementing mental health care programs in relief settings. Consideration of the unique context and culture in each community, an understanding of the line between childhood and adulthood, and an appreciation for local perceptions of psychopathology and emotional disturbances all contribute to a robust approach (Jones, 2008). de Vries and Klazinga (2006) again stress the importance of community-focused and sustained care and caution against the danger of recovering communities becoming dependent on foreign aid. They also suggest that dependency on foreign intervention could incapacitate future community resilience by undermining established local practices and mechanisms. A focus on community capacity-building could help address future mental health needs early on, and by integrating local practices and values, lower potential stigma (de Vries & Klazinga, 2006). As an example, indigenous religious and spiritual practices provide structured ways of coping with disruptive events and should also be taken into consideration when developing localized relief programs, despite Western tendencies to focus primarily on empirically validated methodology (Shah, 2006).

Literature on community development stresses the importance of interventions being primarily community guided, with foreign or outside aid providing additional insight and resources. The role of the relief entity is then to provide structure and increase capacity in a sustainable way. This philosophy should also be applied to mental health recovery in postconflict settings, if sustainable recovery and capacity building is to be achieved (Chambers, 1983; Inter-Agency Standing Committee [IASC], 2007; Shah, 2006; UN/ISDR, 2003).

A Novel Approach

In light of this research, each postconflict community has unique capacities, predispositions, and needs. This calls for novel approaches that will encompass all of the strengths and needs of a particular community. The Shropshire Music Foundation (SMF) has attempted this approach through their innovative use of music education and peer mentorship in Kosovo, Northern Uganda, and Northern Ireland. The organization began in response to news of the massive ethnic cleansing of Kosovo in 1998. What started as an attempt to bring the joy of music to 300 children in a Gjakovë Internally Displaced Persons (IDP) camp grew into a self-sustaining program fostering reconciliation through human rights-themed music and community concerts. The mission of SMF "is to redress psychosocial trauma, advance emotional health, develop scholastic achievement, foster ethnic tolerance, promote peace, and improve the quality of life for war-affected children and adolescents through the establishment of ongoing music education and performance programs" (www.shropshirefoundation.org). The program in Kosovo consists of weekly music classes in Gjakovë-area elementary and junior high schools (twice weekly in the summer), which are lead by volunteering program graduates. Students learn to sing together, play drums, harmonicas, and penny-whistles, acquiring the ability to read music and frequently perform at local festivals and concerts. Weekly classes are also held in the Slovene village for children who have lost families because of the war, and a new program was recently started in neighboring Skivjan. The program volunteers are trained biweekly to read and compose music, play instruments, teach classes, read and speak English, and are exposed to time management and employment skills as well as peace and tolerance promotion.

Purpose of the Current Study

Although SMF reports significantly higher secondary education graduation rates and college enrollment (www.shropshirefoundation.org), there has not yet been an independent investigation or a careful, systematic examination of the program's effectiveness in terms of psychological outcomes. In light of existing research demonstrating the effectiveness of participant-driven, community sustained interventions it was specifically hypothesized that children participating in SMF programming would evidence greater resiliency and, correspondingly, less distress than nonparticipating children.

Secondarily, we also planned to explore the relationship between PTSD symptoms, attentional problems, and behavioral disruption. According to Husain, Allwood, and Bell (2008), traumatic exposure in childhood is significantly related to attention problems, though mediated by PTSD symptoms, among war-affected children in the Balkan region (i.e., Sarajevo, Bosnia). They noted that because children maintained hypervigilance to danger, their sustained attention on tasks (e.g., instruction) was thwarted. Because the current study specifically focused on programming that explicitly involved an instructional setting, we sought to further characterize the relationships among PTSD symptomology, attentional disruption, and adverse behavioral outcomes.

Method

Participants

Seventy-four Kosovars, including 42 boys (56.8%) and 32 girls (43.2%) ranging in age from 8–18 ($M = 12.25$ $SD = 2.9$), took part in the current study. Participants included program graduates actively volunteering at SMF ($n = 19$), students from an established program in Gjakovë who participated at least the preceding school year ($n = 22$), recently enrolled children from a new program in Skivjan ($n = 12$), and friends of program volunteers with no previous program involvement ($n = 21$).

Measures

Child Behavior Checklist (CBCL). The CBCL (Achenbach & Rescorla, 2001) is an objective, standardized measure that characterizes social, behavioral, and emotional functioning in children ages 6 to 18. The CBCL is widely utilized in both clinical and research settings and can be completed in about 15 to 20 min by a child's caregiver. For this study, the CBCL was obtained in Albanian directly from the test publishers. The publisher's computerized scoring software system was used to produce three competence scales (Activities, Social, and School), a Total Competence score, and eight empirically developed syndrome scales (Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, and Aggressive Behavior). Three of the syndrome scales (Anxious/Depressed, Withdrawn/Depressed, and Somatic Complaints) combine to produce an Internalizing Problems score, while two other syndrome scales (Rule-Breaking Behavior, Aggressive Behavior) produce an Externalizing Problems score. An Other Problems score is a sum of the scores of items not included on the syndrome scales, and the Total Problems score represents a sum of all problems endorsed on the problem items of the CBCL form. The CBCL also has six diagnostically oriented scales (Affective Problems, Anxiety Problems, Attention Deficit/Hyperactivity Problems, Conduct Problems, Oppositional Defiant Problems, and Somatic Problems), as well as scales for Sluggish Cognitive Tempo, Obsessive-Compulsive Problems, and Posttraumatic Stress Problems.

According to the test manual, the CBCL has high test-retest reliability at both the item level ($r = .95$ to 1.00) and across the competence scales, problem scales, and DSM-oriented scales (mean $r = .90$ for CBCL competence and problem scales; $r = .79$ – $.88$ for the DSM-oriented scales). Internal consistencies for the competence scales ($\alpha = .63$ to $.79$), problem scales ($\alpha = .78$ to $.97$), and diagnostically oriented scales ($\alpha = .72$ to $.91$) were also adequate. The CBCL items and scales have shown significant discriminant validity ($p < .01$) between children who are referred for help and nonreferred children, when controlling for demographics.

Human Figure Drawing Test (HFDT). The HFDT is a brief measure of both cognitive and emotional functioning in which children are asked to draw a picture of a human figure. The test does not require a common language and may be group administered in only a few minutes by a trained examiner, making it particularly appropriate to the music program setting (Mitchell, Trent, & McArthur, 1993). Scoring consists of noting the presence

or absence of 74 clinically relevant features in the drawing. The number of endorsed items produces three quantitative scales: Impairment (total number of endorsed items), Distortion, and Simplification. An Organic Factors Index (OFI) is calculated by subtracting the Simplification raw score from the Distortion raw score. OFI scores above 4, in the presence of a high Impairment score, suggest the possibility of a brain-based condition impacting cognitive functioning (e.g., a degenerative illness). Scores -4 and below on the OFI suggest that intellectual disability may be present, while scores between -4 and 4 are indeterminant.

According to the test publisher's manual, the HFDT has been shown to have sufficient reliability. Among inexperienced raters of drawings (graduate and undergraduate psychology students) and psychologists, item agreement ranged from 86% to 92% in two different studies. Assigned Impairment level based on the Impairment score was identical among raters in 50% to 75% of the drawings scored ($\kappa = .23$ to $.77$). Cronbach's alphas for the Distortion ($.77$) and the Simplification ($.85$) scales indicated acceptable to good internal consistency, respectively.

The scales and indexes of the HFDT also show good validity. The Impairment score was found to be significantly associated with diagnostic group, $F(5, 481) = 48$; $p < .000$, after controlling for age, education, and IQ. The Impairment Scale and the OFI correctly distinguished Groups 72% of the time (Mitchell et al., 1993). No significant relationship was found between ethnic group membership and Impairment score, and age and education accounted for only a small proportion of the variation in scores. IQ was found to correlate with the Impairment score ($r = -.43$), but accounted for a smaller portion of the variance (27%) than diagnostic group.

Beery Visual-Motor Integration Test (VMI). The Beery VMI is a valid and reliable, well-published, standardized measure of cognition that can be group administered to children 7 years of age or older into adulthood, requiring approximately 10 to 15 min for completion (Beery, Buktenica, & Beery, 2006). The measure consists of 27 items, which reflect a developmental sequence of geometric forms to be copied with paper and pencil into the test publisher's prepared booklet. The VMI is intended for use in identifying significant cognitive difficulties (predominantly in visual and/or motor abilities), as well as for assessing the effectiveness of intervention programs in educational settings, and for research purposes. According to the measure's authors, the VMI possesses strong reliability (interscorer = $.94$; test-retest = $.87$; and internal consistency = $.96$) and has demonstrated good concurrent validity with the Comprehensive Test of Basic Skill ($r = .63$), as well as the copying score of the Developmental Test of Visual Perception (DTVP-2; $r = .75$) and the drawing subtest of the Wide Range Assessment of Visual Motor Abilities (WRAVMA; $r = .52$).

Procedure

Trained staff, fluent in Albanian, obtained written consent from parents using a consent document translated into Albanian prior to participation in this study. Following consent, parents were provided with the CBCL measure, also translated into Albanian (which was available directly from the test publisher). Children in the established Gjakovë and newly initiated Skivjan groups completed the drawing measures during a session of their participation

in SMF programming. The SMF teen/young adult volunteers completed measures following a training event at which they worked on their musical skills for leading programming. The friends of the SMF teen/young adult volunteers arrived at the end of the training event and completed the study measures at the same time as the teen/young adult SMF volunteers. All participants and data were treated in accordance with the Institutional Review Board and the *Ethical Principles of Psychologists and Code of Conduct* (American Psychological Association, 2010).

Results

Correlation Analyses

Participants included in the initial correlation analyses consisted of only students who participated in the school program for either an extended period of time or had just entered a new branch of the program at the time the study was being conducted ($n = 34$). The groups consisted of students seen in Gjakovë for extended period of time ($n = 22$), and students just beginning the program in neighboring Skivjan ($n = 12$). Pearson product coefficients were used to evaluate associations among the dependent measures (HFDT scores, VMI score, and CBCL parent ratings) while point biserial correlations examined the relationship between the type of program (established programming in Gjakovë vs. new programming in Skivjan) and each of the dependent measures. Correlations are displayed in Table 1. Results revealed that type of school program was negatively correlated with HFDT OFI ($r_{pb} = -.45$, $p = .01$), VMI scaled score ($r_{pb} = -.43$, $p = .01$), CBCL Competence scaled scores for activities ($r_{pb} = -.46$, $p = .02$), and CBCL diagnostically oriented scales for affective problems ($r_{pb} = -.50$, $p = .01$). Each scale is an indicator of problems or impairment, with higher scores indicating greater difficulty; thus, the results suggest that children who attended the musical school program for a longer period of time evidenced fewer signs of cognitive disruption than children who had just entered the music programming. This also suggests that children who have attended SMF programming for a longer period of time have less psychological and affective disruption than children who have just entered SMF programming. In addition to simple correlations, t tests were run to evaluate the significance between each of the signif-

icant correlations. The HFDT OFI, $t(32) = 2.89$, $p = .007$, with effect size ($d = 1.02$), VMI scaled child score, $t(31) = 2.64$, $p = .01$, with effect size ($d = .95$), and CBCL diagnostically oriented scales for affective problems, $t(22) = 2.72$, $p = .01$, with effect size ($d = 1.16$) were all found to be statistically significant and demonstrated large effect sizes. In contrast, the CBCL Competence scale scores for activities were nonsignificant.

Mediation Analyses

Participants included in the mediation analyses consisted of the total number of participants in the study ($N = 74$). The groups consisted of (Gjakovë school A, $n = 10$), Gjakovë school B, $n = 12$, Skivjan school, $n = 12$, Teen SMF Volunteer, $n = 19$, Teen SMF Nonvolunteer, $n = 21$). Mediation analyses were conducted using linear regression to test attention problems as a mediator of the relationship between PTSD symptomology and conduct problems. PTSD symptomology, as measured by the Posttraumatic Stress Problems scale of the CBCL, was entered into Step 1 as the predictor and the mediator was entered into Step 2. Conduct problem scores served as the outcome variable. Regressions examining attention problems as a mediator between PTSD symptomology and development of conduct problems revealed a significant positive association between PTSD symptomology and attention problems ($\beta = .52$, $p = .001$) and between PTSD symptomology and conduct problems ($\beta = .44$, $p = .001$) suggesting that higher PTSD symptomology is associated with higher levels of attention problems, as well as conduct problems. The standardized regression coefficient for PTSD symptomology was reduced from .44 to .22 when attention problems were added to the model, and became nonsignificant which suggests full mediation. The Sobel test confirmed significance of the attention problem mediation ($z = 6.29$, $p = .001$). These results are displayed in Figure 1.

Discussion

Overall, the current results suggest a reciprocal association between SMF programming in Kosovo and the garnering of cognitive, affective, and behavioral health among young people in the aftermath of war. Our findings are consistent with existing re-

Table 1
Correlations of School Program, HFDT Scores, VMI Scores, and CBCL Parent Ratings

	1	2	3	4	5	6	7	8	9	10	11
1. School program	—	-.07	-.16	-.08	-.45**	-.43*	-.46*	.07	.13	-.14	-.50*
2. HFDT impairment		—	.66**	.83**	.34**	-.05	.05	-.04	-.09	.12	.06
3. HFDT distortion			—	.56**	.34**	-.16	.06	-.02	-.09	.10	.01
4. HFDT simplification				—	.39**	-.16	.08	.02	-.15	.19	.14
5. HFDT organic					—	.09	-.08	-.09	.21	-.08	.13
6. VMI score						—	-.13	.06	.30	-.15	.18
7. CBCL competence (activities)							—	.24	-.16	.70**	.20
8. CBCL competence (social)								—	.12	.72**	.05
9. CBCL competence (school)									—	.02	-.36*
10. CBCL competence total										—	.02
11. CBCL affective problems											—

Note. HFDT = Human Figure Drawing Test; VMI = Visual Motor Integration Test; CBCL = Child Behavior Checklist.
* Significant at $p < .05$. ** Significant at $p < .01$.

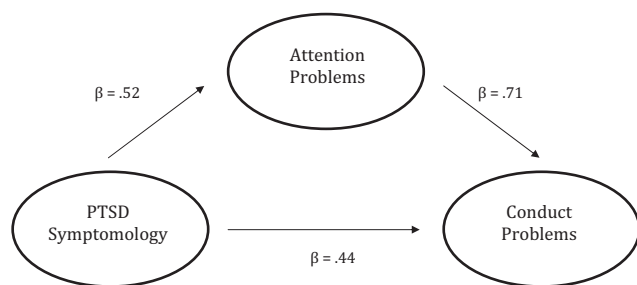


Figure 1. Attention problems as a mediator for posttraumatic stress disorder (PTSD) symptomology and conduct problems.

search documenting the impact of trauma on cognitive and emotional development of children (e.g., Amsworth & Holaday, 1993; Rescorla et al., 2012) and support the report of SMF, which indicates significantly better educational outcomes among children who participant in SMF programming. The results of the correlation analyses demonstrated that students who had been in the program longest exhibited the fewest signs of emotional, psychological, and cognitive disruption. Though the current research did not evaluate all aspects of the SMF programming to decipher unique contributors to these results, it is likely that a host of factors are involved. Cognitive stimulation, promotion of attention and focus through the process of learning musical instruments and songs, social support from peers in a nontraditional classroom setting, the community-sustained infrastructure, and/or the message of peace and communal unity promoted by the program leaders likely all contribute to the outcomes evidenced by this study. Future research that explores the role of each of these variables in relation to psychological outcomes is encouraged.

In addition, language and cultural differences presented some unique limitations for measure selection and test administration. In order to maximize the number of children tested within a limited time frame, and to minimize confounds associated with language differences, we chose brief tests of nonverbal cognitive functioning that could be administered relatively quickly in a group setting (the HFDT and the VMI). However, there are some limitations associated with these measures. While each of these tests provides information of general cognitive functioning, detailed information about either strengths or deficits is not provided. While both measures have been shown to have sufficient reliability and validity, initial standardization samples of all tests consisted of individuals in the United States, rather than children in Kosovo or other postwar countries. There is very little to no previous research that has examined the psychometric properties of these measures with non-Western populations. Furthermore, the necessary group administration method limited the researchers' ability to collect individual behavioral observations, which may have provided more specific information about the children's functioning. Similar limitations are notable with respect to use of the CBCL. We used a version of the measure provided by the test publisher and translated into Albanian, for which there is no available normative data; therefore, we were not able to ensure that the Albanian version of the CBCL held sufficient translational equivalence and psychometric properties comparable to the original version. However, because the same measures were used with all children in the

study, who were essentially homogenous, any error variance associated with the translations should be constant across the sample. In addition, the CBCL was completed by parents or caregivers. While this data was invaluable and contributed to significant findings, interviews of children or child-report measures might have provided additional useful objective information. Given the large effect sizes found in this study, future research is encouraged to acquire greater depth and breadth of outcomes. Likely this would require placing trained investigators into the existing SMF framework for a sustained period of time.

The relationship between PTSD symptomology, attention problems, and conduct problems demonstrated by the mediation analysis suggests the need for a holistic approach when working with traumatized youth. Programs addressing solely PTSD symptoms or only focusing on behavior problems may not be as effective as a program that utilizes a multifaceted approach, with an understanding that multiple symptoms and effects are often interwoven and difficult to distinguish or independently address without affecting other relevant factors. This supports the assertions made by the World Health Organization (2012) and Jones (2008) that program administrators and mental health practitioners need to develop integrated, holistic programs capable of addressing the diverse effects and amplifications traumatic life events often produce.

The SMF programming in Kosovo is a model consistent with suggestions by de Vries and Klazinga (2006) and the findings from this study have important implications for the power of sustainable, integrated and community-focused approaches for fostering psychological well-being and community health. One of the most important strengths of a mental health care program in non-Western settings, as suggested by de Vries and Klazinga (2006), is community ownership. Though SMF was founded and is operated under the leadership of an American musician, the daily programming is run by community volunteers and local program graduates. The use of local volunteers and program graduates promotes community as well as enables the program more flexibility to reach out to a wider range of war-affected children in Kosovo.

Given the demonstrated effectiveness of the SMF program for children and adolescents, and the empirical evidence that trauma experienced in childhood can impact individuals into adulthood (Morina et al., 2011; Priebe et al., 2010), valuable future research may focus on evaluating the maintenance of these gains and the long-term effectiveness of community-based programs. In addition, SMF's programs in Northern Ireland and Uganda present opportunities to evaluate the program model within different communities which have varying experiences of war and trauma, as well as different reactions to and interpretation of past events.

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