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The Use of Therapeutic Group Drumming with Korean Middle School Students
in School Violence Prevention Programs

A DISSERTATION
submitted by

Eun Sil Suh

In partial fulfillment of the requirements
For the degree of
Doctor of Philosophy

LESLEY UNIVERSITY
November 2015



Lesley University
 Graduate School of Arts & Social Sciences
 Ph.D. in Expressive Therapies Program

DISSERTATION APPROVAL FORM

Student's Name: Eun Sil Suh

Dissertation Title: The Use of Therapeutic Group Drumming with Korean Middle School Students in School Violence Prevention Programs

Approvals

In the judgment of the following signatories, this Dissertation meets the academic standards that have been established for the Doctor of Philosophy degree.

Dissertation Committee Chairperson: Michelle Inicia 11/4/15
 (date)

Internal Committee Member: Roger C. Cuff 10/29/15
 (date)

External Committee Member: DMorris
 (date)

Director of the Ph.D. Program/External Examiner: D. H. T. S. M. 10/29/2015 11/6/15
 (date)

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate School of Arts and Social Sciences.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

Michelle Inicia
 Dissertation Director

I hereby accept the recommendation of the Dissertation Committee and its Chairperson.

[Signature]
 Dean, Graduate School of Arts and Social Sciences

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SIGNED:

A handwritten signature in black ink, appearing to be 'M. Egan', written in a cursive style.

ACKNOWLEDGEMENTS

I gratefully thank my committee chair Dr. Michele Forinash, and internal committee member Dr. Robyn Cruz for their invaluable support and guidance. I will always remember your precious contributions, insightful knowledge, and professional attitude. You are my role models as a researcher and educator. Very special thanks to Dr. Josephine Kim, external committee from Harvard University, for her sincere support and heartfelt feedback. I was so inspired by your thoughtful and humble, but very precise, consultation.

I would like to thank Professor Barbara Crowe and Professor Robyn Rio from Arizona State University. I was so honored to have you as my first music therapy professors in my undergraduate program. As I studied with you more, I fell more in love with music therapy. Many thanks to Dr. DiGiammarino and Dr. Cindy Ropp from Illinois State University in master's program; your invaluable support and the priceless experiences you provided helped me to grow and gave me enthusiasm for pursuing doctoral study. Thanks to Dr. Eun Mi Kwak, you answered my email first when I was really curious to know about music therapy and let me visit your place at the University of Kansas and encouraged me to study music therapy.

Special thanks to Dr. Hyun Ju Chong, Dr. Soo Ji Kim, and clinical supervisors from Ewha Womans University who has been encouraging and inspiring every single moment. I cannot express enough how much of a privilege has been to work with you. Your encouragement and advice have been essential for learning from your enormous insight, your knowledge, and your adventurous mind.

Thanks to all cohort 5 doctoral students at Lesley, especially Kyung Soon and Hyejin for their wonderful companionship. I cannot imagine my doctoral journey without you. Your support and deep relationship were huge resources to keep me moving forward. To Wang Feng Na, I would not be able to be where I am right now without your help and friendship.

To my mother Haja Shin and my father Dr. Hak Soo Suh, I deeply appreciate your unconditional love and prayer. I am so proud that you are my parents in my life. You are my inspiration, role models, and faith. I am grateful to be called 'Dr. Suh.' as my father has been called for all my life. My mother-in-law, Nam Iee Jin, and sister and brother-in-law's family, I deeply appreciate your trust and support all the time. To my sisters Eun Jung and Eun young's, and brother Dong Hyuk's family, even though we live so far away from the US and Korea, we are so close in love and prayer. I miss you so much!

To my dearest daughters Hosu and Sua, I cannot express enough how much I thank you and I love you. Thank you for understanding and waiting for a busy mom for a long time. You are my light and my hope. To my deeply loving husband, Jae Mun Kim, who always supports, encourages, and prays for me, I'm so impressed by how you have supported and understood me. Your efforts during my absence for my doctoral process are uncountable. My love is a crescendo as I live with you more.

Finally and foremost, I give thanks to God; You are my light, my strength, my resource, and my way. I am here because You are always with me.

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ABSTRACT

School violence has become a serious social issue and one of the major problems in schools in Korea. Group drumming interventions have shown positive effects in helping adolescents to reduce stress, manage anger related to aggression, promote social skills, and decrease behavioral incidents. The purpose of this study was to examine the effects of a therapeutic group drumming intervention on school violence prevention in middle school students. The research questions were (a) Which of the following three interventions was most effective in reducing aggression of middle school students in Korea: a lecture-based general prevention program, a therapeutic drumming group that used activities designed to address aggression prevention, or a drumming group that taught group drumming skills? and (b) How might a therapeutic drumming impact middle school students with regards to school violence prevention?

A pre- and post-test non-equivalent group design was first used for quantitative data collection using the Korean version of Aggression Questionnaires (K-AQ) and its four subscales: physical aggression, verbal aggression, anger, and hostility. Participants ($N = 231$, female = 116, male = 115) were from the third year class (9th grade) of an urban middle school in Daegu, Korea. The participants were divided into three groups: general prevention group (control group), therapeutic drumming group, and drumming group.

The quantitative results suggested a significant Time \times Group interaction on K-AQ total scores ($F_{(2,228)} = 4.65, p < .05, \eta^2 = .039$) and on physical aggression ($F_{(2,228)} = 3.21, p < .05, \eta^2 = .027$) and hostility ($F_{(2,228)} = 3.18, p < .05, \eta^2 = .027$) sub-scale scores, with no significant differences on verbal aggression and anger sub-scale scores.

Post hoc analysis revealed that the therapeutic drumming group had a significant reduction in total aggression scores and on the subscales of physical aggression and hostility compared to the drumming group; however, no significant differences were found between the therapeutic drumming group and the control group (the general lecture group). Ten participants (female = 4, male = 6) were selected from the therapeutic drumming group for interviews and 55 participants from the therapeutic drumming group were asked to fill out an open-ended survey to obtain qualitative data. A total of 492 meaningful statements resulted from the survey and interviews, and these statements were categorized into seven themes: somatic responses to drumming, emotional processing, group cohesion, empathy, relationship with peers, self-esteem, and self-regulation.

The findings of this study indicated that both the control group and the therapeutic drumming intervention were significantly associated with a reduction in aggression related to school violence. Moreover, students in the therapeutic drumming group reported enhanced peer relationships, which they thought in turn lowered hostility. This study implied that collaborative work with school music teachers and music therapists may be used effectively to mitigate aggression related to school violence in middle school students in Korea.

CHAPTER 1

Introduction

School violence is an issue of concern in the United States, Korea, and beyond. Since the 1999 Columbine shootings, a number of reports in the media have addressed serious events of school violence (Esbensen & Carson, 2009; Muschert & Peguero, 2010). For the last several years, school violence has become a serious social issue and one of the major problems in schools in Korea (Lee & Oh, 2012; Ministry of Education, 2014).

School violence refers to aggressive and antisocial behaviors among students that result in physical harm or emotional harm (Juvonen, 2001; Sheehan, Kim, & Galvin, 2004). Physical harm, as an overt form of aggression, falls under the category of physical aggression (Paquette & Underwood, 1999), and emotional harm, as a covert form of aggression, tends to be understood as relational aggression (Owens, Shute, & Slee, 2000). Bullying has been identified as one of the aggressive behaviors that demonstrate unequal power among students (Espelage, et al., 2013). Students who experience school violence manifest a number of psychological and physical symptoms such as low self-esteem, school avoidance, low educational achievement, post traumatic stress disorder, dropping out of school, and suicide (Esbensesn & Carson, 2009; Hammoned, Whitaker, Jutzker, Mercy, & Chin, 2006; Peguero, 2011; Peguero & Popp, 2011). A number of prevention and intervention approaches to prevent the problematic outcomes of school violence have been proposed.

School Violence Programs and Aggression

A number of school violence prevention programs focus on decreasing aggression (Barnes, Smith, & Miller, 2014; Leff, Power, Manz, Costigan & Nabors, 2001), and research has discussed the importance of having them in place (Esbensen & Carson, 2009; Hammoned et al., 2006; Pequero, 2011; Peguero & Popp, 2011; Stueve, O'Donnell, & Link, 2001). According to Barnes et al.'s (2014) meta analysis, cognitive-behavioral school-based interventions are widely used for reducing aggression, and research is currently examining the effectiveness of this approach. Another prevention approach based on social-emotional learning (SEL) is the effective bullying and aggression prevention approach (Jones at al., 2013). The program is based on Bandura's (1986) social learning theory that teaches self-regulation and communication skills to students (Shafer & Silverman, 2013). Based on this theory, teaching social skills such as empathy, anger management, impulse control, and listening skills are effective in reducing middle school students' aggression (Espelage at al., 2013). Arts-based interventions for school violence prevention have included dance and movement (Beardall, 2008; Hervey & Kornblum, 2006; Koshland & Wittaker, 2004), art (Zivin, et al., 2001) and music (Nócher-Ribaupierre & Wölfl, 2010; Shafer & Silverman, 2013), and have attracted growing interest.

Music Therapy for Adolescents

Few music interventions have been researched for their effects on reducing aggression related to school violence; nevertheless, numerous research studies report the effectiveness of music therapy approaches on adolescents' various emotional, behavioral, psychological, and developmental problems (Albornoz, 2011; Chong & Kim, 2010; Gold,

Wigram, & Voracek, 2007; Gooding, 2011; Porter, Holmes, McLaughlin, Lynn, Cardwell, Braiden, Doran, & Rogan, 2011; Sharma & Jagdev, 2012). Music improvisations, psychotherapy using songs, and music and imagery, have been identified as effective music therapy approaches in the treatment of psychological problems (Bonny, 2002; Priestley, 1994; Wigram, 2004). Listening to music from one's culture was reported to improve the self-esteem of academically stressed adolescents (Sharma & Jagdev, 2012). Improvisational music therapy was reported to have significant effects on communication and interaction skills for adolescents with behavioral and emotional problems (Porter et al., 2012), and on depression in adolescents with a history of substance abuse (Albornoz, 2011). Music therapy after-school programs for adolescents with emotional and behavioral problems have demonstrated their effectiveness in improving social skills and decreasing the students' problem behaviors (Chong & Kim, 2010), and drumming is also being used increasingly as a therapeutic strategy in such programs (Bittman, et al., 2003; Friedman, 2000).

The Positive Effects of Drumming

Drumming interventions for adults and adolescents can reduce stress (Bittman et al., 2003; Bittman, Dickson, & Coddington, 2009), improve the social-emotional functioning of students (Ho, Tsao, Bloch, & Zeltzer, 2011), enhance communication (Bittman et al., 2003; Camilleri, 2002), serve as a pathway for emotional expression (Laukka & Gabrielsson, 2000), assist in the rehabilitation of psychiatric patients (Longhofer & Floersch, 1993), and alleviate post-traumatic stress (Bensimon, Amir, & Wolf, 2008). Drumming activities can also encourage innovation and engagement in

university classroom settings and can potentially improve professional management practices (Moore & Ryan, 2006).

Drumming has also been used for therapeutic purposes such as anger management (Slotoroff, 1994), substance abuse recovery (Blackett & Payne, 2005), increasing self-esteem, developing leadership skills (Sharma & Jagdev, 2012), and for rehabilitation in forensic settings (Watson, 2002). Additionally, drumming has been reported to increase focus and concentration (Kaplan, 2000; Stevens & Burt, 1997).

Few studies have shown the positive effects of drumming interventions for adolescents. The use of group drumming has been shown to reduce stress and anger related to aggression (Bittman, et. al., 2003; Bittman, Dickson, & Coddington, 2009), while structured body percussion and playing percussive instruments in prevention and intervention programs for bullies and victims of bullying was suggested as a possible approach for middle school students. It allows everyone to participate concurrently in a success-oriented activity that utilizes approaches from conceptual to experiential music (Shafer & Silverman, 2013). Other researchers concluded that group drumming as a school-based activity promoted social skills and decreased behavioral incidents in at-risk adolescents (Wood, Ivery, Donovan, & Lambin, 2013). Group drumming can also provide children and adolescents a safe and supportive environment for developing social and emotional competencies (Kalani, 2005).

There was a dearth of current literature on music therapy and adolescents, and only a handful of studies related to music interventions used to prevent school violence. Moreover, there were no music or group drumming experimental intervention studies reported in the area of school violence. As such, the present study aimed to explore the

effectiveness of music interventions in reducing student aggression as part of a school violence prevention program, with focus on therapeutic group drumming interventions using percussive instruments.

Purpose of the Study

The purpose of this study was to examine the effects of a therapeutic group drumming intervention on school violence prevention in middle school students. Aggression was the main factor to measure school violence. The form and range of aggression varied, depending on how the term is defined (Chesney-Lind, Morash, & Irwin, 2007). Aggression is hostile, injurious, or destructive behavior against another person (Christner, Friedberg, & Sharp, 2006). Aggression unifies the theories of anti-social behavior, bullying behavior, and interpersonal violence (Walker, 2010).

School violence prevention programs based on social-emotional learning theory, which teaches empathy, anger management, impulse control, and listening skills, have demonstrated effectiveness in reducing middle school students' aggression (Espelage et al., 2013). As many students use aggression to manipulate other students (Farmer, Farmer, Estell, & Hutchins, 2007; Vaughn, Vollenweider, Bost, Azria-Evnas, & Snider, 2003), interventions to reduce aggression would be essential. Although music and group drumming interventions were already reported to improve psychological, emotional, social functioning of adolescents, pursuing evidence-based research to demonstrate these positive effects is important to undertake. Music therapists often work with school music teachers in school settings, and music teachers familiar with school systems and school violence policies have longitudinal relationships with students (Carter, 2011; Tayler, 2011). Therefore, collaborative work between music therapists and music teachers in

school settings may be beneficial for reducing and preventing school violence (Silverman, 2013).

The goal of this study was to reduce students' aggression as related to school violence and to examine how students experienced the collaborative work of the music teacher and the music therapist in the therapeutic group drumming intervention program. In the study, the level of students' aggression were compared across three groups: 1) general prevention group without using music and any percussive instruments, 2) therapeutic group drumming intervention by a music teacher who was trained and supervised by a professional, experienced music therapist in this approach, 3) and group drumming intervention facilitated by another school music teacher. In the first phase, aggression questionnaires were analyzed to see the relationship between therapeutic drumming and aggression levels. In the second phase, qualitative interviewing and open-ended survey were the primary method used to examine how participants experienced the program.

Research Questions

Question 1

Which of the three interventions (general prevention intervention group, therapeutic drumming group lead by a music teacher who is trained and supervised by a music therapist, drumming group lead by another music teacher) is most effective in reducing the aggression of middle school students in Korea?

Sub-questions

1. Which of the three interventions is most effective in reducing physical aggression in middle school students?

2. Which of the three interventions is most effective in reducing verbal aggression in middle school students?
3. Which of the three interventions is most effective in reducing anger in middle school students?
4. Which of the three interventions is most effective in reducing hostility in middle school students?

Question 2

How does therapeutic group drumming impact middle school students with regard to school violence prevention?

Chapter one provided the research questions and background of this study. The study employed a school-based prevention program using drumming led by a school music teacher who worked collaboratively with a music therapist and another school music teacher. The general prevention program, the therapeutic drumming group, and education-based group drumming will be compared using both quantitative and qualitative data gathered from asking the research questions.

CHAPTER 2

Literature Review

In the United States, an estimated 50,000,000 students are enrolled in pre-kindergarten through 12th grade. According to the Centers for Disease Control and Prevention (CDC), more than 738,000 school-aged children and young adults were treated in emergency departments for injuries caused by violence in 2010. Over 12% of students in grades 9 to 12 reported experiencing more than one physical fight in the 12 months before the survey, and nearly 20% of students reported being bullied during the school year (CDC, 2015).

School violence refers to aggressive and antisocial behaviors among students that result in physical harm or emotional harm (Juvonen, 2001; Sheehan, Kim, & Galvin, 2004). Physical violence includes physical harm such as bullying, slapping, punching, and weapon use (CDC, 2015). Emotional violence includes hurting others' feelings (Molina, Dulmus, & Sowers, 2005), such as verbal harassment and spreading rumors (Juvone, 2001; Sheehan, Kim, & Galvin, 2004). Other forms of school violence include dating-related aggression (Hilto, Jarris, Fice, Krans, & Lavigne, 1998), electronic aggression such as cyber bullying, and gang violence (CDC, 2015).

Bullying is a subtype of aggression defined as behavior that repeatedly targets a weaker or relatively defenseless victim (Smith, 2011). According to Smith's (2011) study, bullying was first studied mainly in Scandinavia since the 1970s. In the 1990s, Olweus (1993) developed the Olweus Bullying Prevention Program (OBPP) that resulted in significant decrease in bullying behavior in Norway. The students who show bullying behavior tend to have low family socioeconomic status and antisocial parents, and tend to

exhibit physical aggression (CDC, 2015). They also tend to have social problem behaviors such as restlessness or overactivity, disruptive classroom behavior, a lack of self-regulation, poor school readiness (Walker, Severson, Stiller, & Golly, 1998), poor academic achievement, and poor attachment to school (Henrich et al., 2004; Juvonen et al., 2000).

In the Olweus Bullying Prevention Program (OBPP), physical aggression was identified as a target behavior to be decreased but not relational aggression behavior. Around 2004, the form of bullying changed with the appearance of cyber bullying. Even though much cyber bullying is initiated outside of school, problem behaviors related to cyber bullying often manifest in school as aggressive behavior (Smith et al., 2008).

Aggression and Adolescents

Types of Adolescent Aggression

Aggression is defined as hostile, injurious, or destructive behavior against another person (Christner, Friedberg, & Sharp, 2006). Physical aggression includes hitting, threatening, and pushing (Leff, Power, Manz, Costigan, & Nabors, 2001); relational aggression does harm to peer-relationships (Crick & Grotpeter, 1995) through means such as rumor spreading, social exclusion, and threats to withdraw friendship (Crick, Bigbee, & Howes, 1996). The OBPP (1993) reported significant reduction in students' bullying behavior. This study focused on overt forms of physical aggression. The majority of studies focused on physical aggression and verbal aggression (Sullivan, Rarrell, & Kliewer, 2006) as related to school violence; furthermore, relational aggression has increased in the last 20 years (Chesney-Lind, Morash, & Irwin, 2007; Crick, Bigbee, & Howes, 1996; Crick & Grotpeter, 1995; Elasseer, Borman-Smith, &

Henry, 2013; Goldstien, Young, & Boyd, 2008; Nixon & Werner, 2010). Understanding the factors related to relational aggression is especially important for early adolescents because close relationships between peers become very important in this developmental stage, and the risk of perpetration of violence and victimization through relations among peers become high (Savin-Williams & Berndt, 1990).

An ecological approach is the most common form of aggression treatment in school. It emphasizes protective factors against aggressive behavior such as positive school climate, positive relationship between peers, prosocial norms, and rules in school (Bronfenbrenner, 1979; Newman et al., 2000; Shechtman, 2006; Shechtman & Ifargan, 2009).

Middle School Students' Aggression

A majority of articles have described the effects of school violence prevention programs on elementary school students (Capella & Weinstein, 2006; Cavell & Hughes, 2000; Domitrovich, Cortes, & Greenberg, 2007; Leff, Power, Manz, Costigan, & Nabors, 2001). However, recent studies examined the effects of specific programs on middle school students (Elsaesser, Gorman-Smith, & Henry, 2013; Nixon & Werner, 2010; Sullivan, Farrell, & Kliewer, 2006). Middle school students are widely recognized as an important population to study for increasing risk of problematic behaviors such as bullying and aggressive behavior. Empirical studies demonstrated that aggression increased during the middle school age (Scheithauer, Hayer, Petermann, & Jugert, 2006; Multisite Violence Prevention Project, 2008; Werner & Hill, 2010) and reached a peak during students' mid-adolescent ages (Tolan & Gorman-Smith, 2002). The reasons for this increase was associated with the quality of school engagement and family

relationship, which tended to decrease during entry periods to middle school (Multisite Violence Prevention Project, 2008). According to social learning theorists, young adolescents learn from imitating repeatedly observed peer behavior (Bandura, 1986). Peer relationships become highly important at this development stage, so perpetration of violence and victimization might become high (Savin-Williams & Berndt, 1990). Young adolescents might be more susceptible and socially influenced by peer-engaged problem behaviors (Miller-Johnson et. al., 2003), especially from more aggressive peers (Multisite Violence Prevention Project, 2008).

Gender Differences of Aggression Within School Settings

Students' gender should be considered when designing prevention programs (Chen & Astor, 2010; Peguero, 2011; Peguero & Popp, 2011; Speil & Strohmeier, 2011) because the types of aggression related to school violence are different depending on students' gender (Peguero & Popp, 2011; Stueve, O'Donnell & Link, 2001). Stueve, O'Donnell, and Link (2001) researched gender differences in risk factors and self-reported violence among African American and Latino/a seventh and eighth grade students attending middle schools in low-income areas of New York City. A total of 1339 students (male = 617, female = 722) participated in both baseline and six-month follow-up questionnaires of the Violent Behavior Scale. Although female students reported lower levels of violence than male students, the researchers found that interpersonal violence was a pressing problem among both female and male adolescent students. While rates of violence were higher for males than for females, nearly half of female students reported recently threatening to beat someone up or to use a weapon, and over one third reported recently participating in fights, weapon carrying, or weapon use.

Like the study above, many early studies have concluded that male students exhibited more aggressive behaviors than female students (Crick & Grotpeter, 1995; Leff, Power, Manz, Costigan, & Nabors, 2001; Nansel et al., 2001). The Centers for Disease Control and Prevention (CDC) in the United States (2015) and the Korean Ministry of Education (2014) have reported that male students have higher levels of aggressive behaviors such as hitting and pushing types of overt aggression than female students. However, more recent research has focused not only on physical and overt forms of aggression, but also on nonphysical and covert forms of aggression and relational aggression (Crick, Grotpeter, 1995; Goldstein, Young, & Boyd, 2008; Leff et al., 2010). Therefore, depending on how aggression is defined, the result could be different. As nonphysical forms of aggression were added to the perception of aggression by recent studies, the percentage of aggressive acts attributed to male and female students became similar. A number of studies have concluded that female students reported higher levels of relational aggression and were also highly distressed by peers' relational aggression (Crick, Grotpeter, 1995; Goldstein, Young, & Boyd, 2008; Leff, Kupersmidt, & Power, 2003) because female students likely expressed their anger relationally and males expressed their anger physically (Galen & Underwood, 1997; Leff et al., 2003). Many studies have demonstrated that relational aggression occurred more to female than male students; however, recent studies indicated that relational aggression frequently was reported as male students' problem behaviors as well (Juliano, Werner, & Cassidy, 2006; Waasdorp et al., 2010; Waasdorp & Bradshaw, 2009).

Peguero and Popp's (2011) research examined the intersection of gender in the relationship between school-based activities (i.e., academics and sports) and victimization

at school. The sample comprised 5,320 female and 5,120 male students. Students were asked if they had been exposed to various forms of victimization from aggression at school during the school year. The questions included: whether (1) someone threatened to hurt the student at school; (2) someone hit the student; (3) someone used forceful or forceful methods to get money or things from the student. Peguero and Popp (2011) found significant gender differences for victimization at school. Female students reported a lower victimization rate (26%) than male students (41%), and more females participated in academic activities (67%) than male students (40%), but participated less in school sports. The authors concluded that school sports appeared to be an insulating factor against school-based victimization for female students, regardless of their race or ethnicity, even though they participated less in school sports compared to male students.

School Violence Prevention Program

School Violence Prevention: Developmental Framework

There are three broad school violence prevention strategies: universal, selective, and indicated. These three strategies differ with regard to the developmental framework of the interventions (Farmer, Farmer, Estell, & Hutchins, 2007; Molina, Dulmus, & Sowers, 2005; The Multisite Violence Prevention Project, 2008). Universal strategies are designed to apply to all students in a specific school or grade year, and aim to provide support to manage conflict aggression (Farmer et al., 2007; The Multisite Violence Prevention Project, 2008; Mrazek & Haggerty, 1994). Selective strategies are designed to prevent negative behaviors for students at risk of aggression, and whose problematic risk behaviors are above average (Molina, Dulmus, & Sowers, 2005; Mrazek & Haggerty,

1994). Finally, indicated strategies are designed to target students with multiple problems that are associated with specific psychological disorders (Mrazek & Haggerty, 1994).

Included in universal strategies are integrated interventions, providing protective factors through an ecological approach such as positive school climate, developing positive peer relationships, prosocial norms, and rules; these are the most common approaches reported to have positive effects on reducing aggression (Bronfenbrenner, 1979; Newman et al., 2000; Shechtman, 2006; Shechtman & Ifargan, 2009). Dodge (2006) reported the advantages of universal strategies such as integrated classroom intervention as 1) better for aggressive students in group dynamic changes, 2) aggressive students may feel more supported and accepted in class, 3) aggressive students are not labeled, and 4) being cost effective. Although these protective factors against aggressive behaviors are reported as effective in school, highly aggressive students may experience rejection in rule-oriented classrooms because their aggressive behavior becomes more deviant from others, leading to the expulsion from school (Dodge, 2006). Therefore, highly aggressive students might benefit from selective, indicative, or universal strategies. Because school violence prevention is a complex task, multilevel models and strategies are necessary for school violence prevention (Farmer et al., 2007). Such programs need to reduce not only the physical aggression but also influence the contextual factors of social aggression and interpersonal conflict in a desirable way.

School Violence Prevention Programs in Korea

For the past several years, school violence has also become a serious social issue and is one of the major problems in schools in Korea (Lee & Oh, 2012; Ministry of Education, 2014). In fact, school violence has become so cruel and serious that a law

governing school violence protection was passed in 2004. Research conducted by the Ministry of Education in 2012 revealed the gravity of violence in Korean schools after a middle school student died by suicide because of classmates' bullying in Daegu, Korea. The Ministry of Education (2012) reported that the number of students disciplined for violence in schools had increased by as much as 80% compared to the year after this middle school student's suicide in 2004.

One of the main prevention programs is conducted by the Ministry of Education, and is based on the law of school violence protection. This law's directives include (1) the provision of a violence program in school settings once every semester, (2) allocating a professional counselor to the school setting, and (3) providing school violence support (Ministry of Education, 2014). One of the main school violence prevention programs is conducted by the Ministry of Gender Equality and Family. The first part of this program casts a community youth safety net to provide a support network among at-risk students in the community. This network includes connections with the WEE center (We + Education + Emotion) in schools and the Ministry of Education. The second part involves allocating a Youth Cultural Zone in every city to provide a place for young people to play and to play sports (Lee & Oh, 2012). The most recently developed school violence prevention program is called "Ahe Ul Lim" ("get together") and is run by the Ministry of Education (2014). This program is a mostly arts-based approach for students and teachers that featured art, drama, music, and movement; however, only one music activity—song writing—is included. Previous violence prevention programs have mostly been based on cognitive behavioral principles and a teacher's lecture method. Student-centered activities

such as experiencing art, movement, music, and drama might provide a more compelling way of addressing the prevention of school violence in Korea.

Arts-based Approaches to School Violence Prevention Programs

Hervey and Kornblum (2006) evaluated the effectiveness of Kornblum's body-based violence prevention curriculum, "Disarming the Playground", which is a unique body-based violence prevention program for children. Kornblum, who was a dance/movement therapist, developed the body-based violence prevention curriculum in a public school in 1995. The sample included all students in three second-grade classes in an elementary school in Madison, WI ($N = 56$, male = 35, female = 21), and no control group was used. A mixed-methods evaluation of the prevention program was conducted to examine the program's effectiveness. The results of the Behavior Rating Index for Children (BRIC) were analyzed. The BRIC was administered by the class teachers pre-test and post-test (seven months later). The quantitative data were analyzed by one-tailed paired t -test. Results showed that the program had a statistically significant effect ($p = .002$) on reducing the problematic behaviors that can contribute to school violence. The qualitative data were obtained from two classes ($n = 24$). A self-report form included interviews, writings, and drawings. The researcher stated that the data gathered from interview and drawings provided more details about the feelings of the subjects than from the written statements. According to the qualitative data, it was clear that the body-based curriculum helped with learning, and many students reported this as a fun experience. The names of the skills reported learned to prevent violence were ignoring, leaving the situation, slowing or calming down, and I statements, etc. The students reported that they

could easily recall the skills that they had learned for preventing violence because they were fun, easy to remember, and used catchy names.

Koshland and Wittaker (2004) evaluated the PEACE dance/movement-based violence prevention program. This program was designed to teach self-control skills, and decrease aggressive incidents and disruptive behaviors. The subjects were the entire first, second, and third grade classes of an urban elementary school in the Southwest. PEACE was a 12-week program developed by Koshland that used selected children's stories and movement activities in a group process to increase children's pro-social behaviors and spatial awareness, as well as to develop their impulse control, communication, and management of disruptive behaviors. The results showed that there were positive, significant statistical changes in the number of students instigating fights ($p = .041$), failing to calm down ($p = .029$), displaying frustration intolerance ($p = .048$), and throwing articles ($p = .041$), as reported by teachers. The children reported a significant decrease in problematic behaviors both seen and experienced: someone doing something wrong ($p = .001$), and someone throwing something ($p = .001$). Aggressive incidents reported to the office for classrooms participating in the program significantly decreased ($p = .001$) compared to data from non-participating classrooms.

Zivin et al., (2001) evaluated the use of a school-linked art-based violence prevention program for middle school students at high risk for violence and delinquency. Sixty male students (sixth grade = 22, seventh grade = 28, and eighth grade = 10) participated in this study and they were assigned to take part in a treatment group or a control group. The treatment group had 30 sessions (45 minutes each) and the control group was on a wait-list. The teacher used the Sutter-Eyberg Student Behavior Inventory

to rate participants' negative behavior. Statistical analysis of one tailed *t*-test was used to compare the differences between the treatment and control groups. The results showed that those in the art-based violence prevention group had significant changes in psychological risk factors such as resistance to rules ($p < .05$), impulsiveness ($p < .05$), and inappropriate social behavior ($p < .05$). The violence score had positive changes but there were no statistical changes found.

Music and Adolescents

Music Therapy and Adolescents

Music improvisations, psychotherapy using songs, and music and imagery have been identified as effective music therapy approaches in the treatment of psychological problems (Ventre & McKinney, 2015; Priestley, 1994; Wigram, 2004). Numerous research studies report the effectiveness of these three approaches on adolescents' various emotional, behavioral, psychological, and developmental problems (Albornoz, 2011; Chio, 2010; Gold, Voracek, & Wigram, 2007; Porter, Holmes, McLaughlin, Lynn, Cardwell, Braiden, Doran & Rogan, 2012; Sharma & Jagdev, 2012). Music therapy, including clinical improvisation, listening to music, role-play, various games, and painting used within music therapy have been reported to be efficacious approaches for adolescents with mental disorders such as adjustment or emotional disorders, behavioral disorders, and developmental disorders (Gold, Voracek, & Wigram, 2007). Listening to music from a participant's culture was reported as efficacious in improving the self-esteem of academically stressed adolescents (Sharma & Jagdev, 2012). Improvisational music therapy was reported to have significant effects on communication and interaction skills for adolescents with behavioral and emotional problems (Porter et al., 2011) and on

depression in adolescents with substance abuse (Albornoz, 2011). Choi (2010) researched the use of music improvisation, song psychotherapy, and music and imagery in the CAC-MT (Children At Risk: Intervention for the New Generation, CARING-Music Therapy) program for adolescent refugees from North Korea. The CAC-MT program was designed to increase adolescents' self-esteem, as well as to teach problem-solving, relaxation, and self-control. Participants learned how to communicate their traumatic life experiences and seek community support. They also learned appropriate social behavior, and how to set realistic goals for their future. There were no quantitatively significant findings on the effectiveness of the program because of the small sample size. However, qualitative evidence indicated that avoidance, distrust, loneliness, feelings of loss, and fear decreased over the course of the CAC-MT program.

Music Approaches to School Violence Prevention Programs

There have been few research studies on school violence and music programs worldwide. Nöcher-Ribaupierre and Wölfl (2010) researched a music approach for children and adolescents, especially immigrants, to prevent school violence in Germany. The main focus of the study was music and improvisation, which involved the use of cooperation, self, and affect regulation as means of violence prevention. The intervention was designed for both classroom and group settings where students participated in active music making with simple and easy-to-play instruments to express their mental states and tension. In the study, actively playing music together was associated with increasing awareness of mental states, greater expression, and control of tension and aggression. The first steps for the students were to gain awareness of their feelings by expressing them through the music, as well as by experiencing being heard and understood by the other

players. An example of the first steps which the music activity provided include the following: (1) the group played a basic rhythm together, (2) one student took the lead and was accompanied by the others, (3) children played for someone else who was especially in need of attention, and (4) children were offered a unique task while playing together. The steps focused on connection through music and improvisation in a creative approach that allowed children and adolescents to experience aggression and violence intensely through music improvisation.

Seung (2013) surveyed 504 teachers from 94 different elementary, middle, and high schools in Korea to examine the expectations regarding music programs for reducing and preventing school violence. In this study, when asked what techniques were actually used, 43.4% ($n = 353$) of the teachers reported counseling activities, 37.2% ($n = 303$) reported lecture-type interventions, 11.4% ($n = 93$) reported gym activities, and only 2.5% ($n = 20$) reported music activities. When asked if a music program might help prevent school violence, 79.2% ($n = 402$) of the teachers strongly agreed or agreed (32.1% answered “strongly agree”; 47.1% answered “agree”). Based on these findings, it seems that although teachers recognized music might be a viable way of preventing school violence, only a few teachers used music. Developing a music-based program for school violence prevention in Korea is therefore an important goal.

Rationale for Group Drumming

Previous studies provided evidence of group drumming’s success as a therapeutic intervention. Group drumming reduced stress in adults and adolescents (Bittman et al., 2003; Bittman, Dickson, & Coddington, 2009), improved the social-emotional functioning in low-income children (Ho, Tsao, Bloch, & Zeltzer, 2011), assisted in the

rehabilitation of psychiatric patients (Longhofer & Floersch, 1993), improved assertiveness and anger management of adult and adolescent survivors of trauma (Slotoroff, 1994), and alleviated post-traumatic stress in soldiers (Bensimon, Amir, & Wolf, 2008).

Drumming can be a pathway for emotional expression (Laukka & Gabrielsson, 2013). Laukka and Gabrielsson (2000) explored seven different emotions in their research—happiness, sadness, anger, fearfulness, tenderness, solemnness, and neutral (no emotion)—that were successfully perceived by listeners as the intended emotion while listening to drum playing that featured different tempos, dynamics, and timing cues. According to Slotoroff's (1994) study, a male adolescent participant with conduct disorder and aggressive behavior problems identified his emotions (i.e., anger, weakness, and calmness) through playing and listening to drums. Identifying one's emotions was reported to help anger management in the study.

Currie (2012) also explored the benefits of drum playing as a pathway for emotional expression in aggressive male adolescents. Many male students who have aggressive behavior problems and anger management problems tend to experience difficulties in speaking about their negative emotions (Streeck-Fischer & Van der Kolk, 2000). Percussive drum playing assists aggressive and angry male adolescents to symbolize their negative feelings of inner experience, and bridges between the physical experience of anger and the ability to speak about their experience (Currie, 2012). Emotions are commonly described through body sensations, i.e., anger as a pounding heart (Rodocy & Boyle, 1997); emotions may also be awakened through awareness of body sensations (Gardner, 1990). Because drumming creates sound waves, it directly

impacts the drum players' bodies either through air or through mallets and instruments that the players hold (Gardner, 1990; Radocy & Boyle, 1997), and the body sensation may impact instrument players' awareness of the emotions (Watson, 2002).

Dyadic and synchronizing drum playing have been reported to increase individuals' prosocial activity and social interactions. Although the number of participants was too small ($N = 18$), the positive results of synchronized drum playing were explored by Koka, Engel, Kirschner, and Keysers (2011), who found that synchronized drumming enhanced prosocial activity if the rhythm was easy. The participants with ages ranging from 19 to 30 years were scanned with functional magnetic resonance imaging (fMRI) and were given a prosocial behavior test during and after the synchronized and asynchronized drumming group with their partner. The prosocial behavior test had the partner of drumming accidentally drop eight pencils, and then the researcher counted the number of pencils collected by the participants. The results showed that the right caudate of the brain (the region of interest) was activated more for synchronous drumming with the partner than for the asynchronous drumming. Participants in synchronous drumming showed a high level of prosocial commitment, and more pencils were collected by these participants.

In a study conducted by Kleinspehn-Ammerlahn, Riediger, Schmiedek, Oertzen, Li, & Lindenberger (2011), dyadic synchronous drumming has been explored with young adults (age 20-30) who showed higher accuracy of synchronous drum playing. However, the accuracy became lower when the dyad included adolescents or children. Both adolescents and children had higher accuracy when drumming with adults than when drum playing with their age-matched peers. This suggests that adults activate children or

adolescents' zone of proximal development. In the present study, the school teacher leading the group activated the students' social interactions for the above reasons.

Group Drumming for Adolescents

A number of studies explored the therapeutic benefits of group drumming for adolescents. Wyatt (2000) explored the effects of group drumming on increasing high school students' self-esteem and peer relationships. Another study has reported group drumming activity's positive side (Moore & Ryan, 2006). The participants ($N = 17$) were asked to write about their experience in group drumming. The written qualitative data concluded that the group drumming had positive effects on active listening, co-operation, and interdependence for the purpose of building a healthy community in school settings. The use of group drumming with entire classes or small groups made connections, and created a healthy community through transcending cultural, racial, and religious differences in a non-threatening way (Camilleri, 2002). Drumming brought students together without words, competition, and comparison, and it allowed them to focus on themselves and others, because active listening and sound production were required simultaneously (Camilleri, 2002).

Although school settings are tasked to build healthy communities, it has been observed that feelings of insecurity can bring students to commit violent behaviors to gain status in their school community (Camilleri, 2002). Group drumming can provide a safe and supportive environment because there is no right or wrong way to play, as each individual's playing contributes to the group (Maschi & Bradley, 2010). According to brain-based learning studies, students learn more effectively in a safe environment (Jensen, 2000). The feeling of safety and being supported in group drumming experiences

enables students to take risks and explore their issues so that a higher level of learning may be achieved (Jensen, 2000; Maschi & Bradley, 2010). Some studies focused on the benefits of group drumming as a rehabilitation or treatment approach for at-risk adolescents. Group drumming provided learning and social experiences for at-risk adolescents who were isolated from their school or social systems (Snow & D'Amico, 2010) and promoted at-risk adolescents' social skills and decreased behavioral incidents (Wood, Ivery, Donavan, & Lambin, 2013). As noted by Stone (2005), group drumming incorporated into family therapy began to reduce troubled adolescents' at-risk behaviors. In Bittman, Dickson and Coddington's (2009) study, the adolescents who attended a juvenile court-referred treatment program that used a group drumming intervention demonstrated statistically significant improvements on social role performance, depression, negative self-evaluation, and anger. In Australia, a form of group drumming called DRUMBEAT (Discovering Relationships Using Music –Beliefs, Emotions, Attitudes, & Thoughts) was developed by Holyoake for the purpose of preventing substance abuse in adolescents. Participants significantly reduced their absenteeism rate in school, and increased their emotional control, self-esteem, and improved relationships with adults and peers (Faulkner et al., 2012). Wood and her colleagues et al. (2013) evaluated the program and found decreased behavioral incidents and increased self-esteem scores and social relationship skills in at-risk adolescents. In the study, 180 students from 19 schools participated in the ten-week DRUMBEAT program. The results of pre and post survey tests (Rosenberg self-esteem scale) were analyzed by *t*-tests and showed a 10 percent increase in self-esteem scores ($p = .00$). The number of behavior incidents decreased by 29 percent ($p = .00$) for students who participated in the program.

Conclusion

School violence is becoming a serious issue worldwide, and the types and levels of school violence have evolved rapidly. This has spurred research, as well as the development of a variety of prevention and intervention programs. In Korea, school violence prevention programs have been developed rapidly by the Ministry of Education, private organizations for adolescents, and companies. The most recently developed school violence prevention program, Ahe Ul Lim, which is run by the Ministry of Education, is mostly an arts-based approach for students and teachers; however, only one music activity (song writing) is included. Previous violence prevention programs have been mostly based on cognitive-behavioral or teacher lecture methods. Student experience-centered activities such as art, movement, music, and drama need to be developed to prevent school violence in Korea.

Music can be utilized as an effective therapeutic medium for adolescents. There have been many research studies on the effectiveness of music for emotional and psychological improvement using music improvisation, song psychotherapy, and music and imagery activities (the methods most often used with adolescents). However, music and music therapy approaches to school violence programming are very limited. Despite the fact that many research studies have shown the positive effects of drumming on enhancing social behavior, active listening skills, self management, emotional expression, dealing with trauma and psychiatric symptoms, and building healthy communities, therapeutic group drumming approaches to school violence programs are very limited. Developing a drumming approach specific to school violence prevention and intervention

is called for, and it will be necessary to measure the effectiveness of group drumming in reducing school violence.

CHAPTER 3

Methods

Design

The research design for the present study was sequential mixed methods. Mixed methods research is “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry” (Tashakkori & Creswell, 2008, p. 4). The core strength of mixed methods is that it combines and integrates both quantitative and qualitative data to understand research problems (Bradt, Burns, & Creswell, 2013). Sequential mixed methods mean that the knowledge obtained from either a quantitative or qualitative dataset is followed by the analysis of a dataset of the complementary type (Brandt et al., 2013). In the present study, a pre- and post-test non-equivalent group design was first utilized for quantitative data collection. The pre-test measures were given one week before the intervention and the post-test measures were given one week after the intervention to three groups: control group, therapeutic drumming group, and drumming group. Following quantitative data collection and analysis, interview data and responses to open-ended question surveys forms were gathered and then analyzed.

Participants

This study was conducted following written approval by the Institutional Review Board of Lesley University, in Cambridge, Massachusetts. Participants were the whole third year classes of an urban middle school in Daegu, the third largest city in Korea. The school is located close to downtown and in a lower and middle class residence region.

The school ran a school violence program once a year and all students had to attend at least 10 weeks of violence prevention programming each year. A total of seven classes in the third year of middle school were divided into three groups: general prevention group which served as the control group, a therapeutic drumming group, and a drumming group. Parental consent forms and student assents were obtained from 284 (98.6%) of 288 students. Fifty-three students (18.6% of the initial sample) were excluded for incomplete or invalid responses, such as filling out all of the questions on the survey form with the same number or missing at least one survey within both pre- and post-testing. Data from a total of 231 participants (81.3% of the initial sample) were analyzed from a total of seven classes. Two classes made up the general prevention intervention group led by the non-music teacher ($n = 70$, female = 35, male = 35), two classes made up the therapeutic drumming group ($n = 65$, female = 30, male = 35), and three classes made up the drumming group ($n = 96$, female = 46, male = 50). Age range was 14 to 15 years old ($M = 14.26$, $SD = .44$), both male ($n = 115$) and female ($n = 116$) students participated (See Table 1).

Table 1

Participants' information (N = 231)

		Con (<i>n</i> = 70)	TD (<i>n</i> = 65)	D (<i>n</i> = 96)	Total (<i>N</i> = 231)
		<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>N</i>
Gender	Male	35 (50)	30 (46)	50 (52)	115
	Female	35 (50)	35 (54)	46 (48)	116

Cont.: Control group (Group 1)

TD: Therapeutic Drumming group (Group 2)

D: Drumming group (Group 3)

Measures

The Aggression Questionnaire (Korean Version; K-AQ) was used. The Buss-Perry Aggression Questionnaire (AQ) (Buss & Perry, 1992) is one of the most popular self-report measures of anger, aggression, and hostility (Morren & Meesters, 2002). The AQ was designed in English but has been translated into many languages, including Korean (Maxwell, 2007). The AQ has been administered to adolescent offenders (Morren & Meesters, 2002), students (Becker, 2007), and adults, such as those with alcohol dependency (McPherson & Martin, 2010). The Korean version of the AQ was developed by Suh and Kwon (2002). The internal reliability of the subscales range from .67 to .86, with a mean of .76, and test-retest reliability ranges from .60 to .83, with a mean of .81. The test is composed of 27 items: nine items that measure physical aggression, five items for verbal aggression, five items for anger, and eight items for hostility (Suh & Kwon, 2002). Each item is rated on a 5-point Likert-type scale ranging from 1 (“extremely uncharacteristic of me”) to 5 (“extremely characteristic of me”).

Procedure

The school year begins in March and the first semester of the year ends in the middle of July in Korea. A trained research assistant explained to the participants that the pre and post-test, and survey results would not be reported to the school, and the results would not affect any school systems, but it would be used only for research purposes. The participants completed the pre-test in the beginning of May of the academic year, one week before the prevention programs were implemented, and did the post-test at the end of July, one week after the end of the programs.

During the week the post-test was administered, 10 interviewees were selected from the therapeutic drumming group who demonstrated high, moderate, and low aggression pre-test scores to study how they experienced the therapeutic drumming group and if their reported experience varied according to the aggression status. The class teachers were asked to recommend three to four participants in each three levels of aggression status. The teachers were asked to select students who had sufficient ability to express their thoughts and feelings verbally in response to open-ended questions.

The 55 participants from the therapeutic drumming group were given an open-ended written survey after the post-test. The questions used in the interviews and the survey were the same. It was explained to them that there were no right or wrong answers and all responses were confidential. The survey was implemented in the classroom and the interviews were conducted in separate and quiet classrooms. Interviews were semi-structured and open-ended; each interview lasted about 30 to 40 minutes and was audio taped and transcribed. The transcription of the data was shown to the participants

individually for member checking. None of the interviewees asked to change the transcriptions. The open-ended survey and interview questions are described in Table 2.

Table 2

Open-ended Survey and Interview Questions

Subjects	Questions
Experience of drumming	<ul style="list-style-type: none"> • How do you feel when you are playing the percussive instruments? • When is the best moment in this class and why? • When are you having a hard time and not feeling good during the music class?
Aggression management	<ul style="list-style-type: none"> • How does the program help you or your classmates to manage anger? • How does the program help you or your classmates to manage aggressive behavior?
Relationship with peers	<ul style="list-style-type: none"> • How does the program help you or your classmates to know each other? • How does the program help you or your classmates to get closer?
Relation to school violence	<ul style="list-style-type: none"> • Do you think this program helps to prevent school violence? If yes/no, why?

The written surveys and interviews were given in the Korean language and the participants were asked to answer in Korean. All qualitative data were transcribed and analyzed in Korean, and then the results were translated into English by the researcher. A doctoral student with a master's degree in music therapy from the US who had both Korean and English proficiency participated in the peer debriefing for the translation reliability. Seven categories and 22 subcategories written in Korean were translated into English by the peer. Any discrepancies of the researcher and the peer's translation in English were discussed and then agreed upon.

Intervention

The therapeutic drumming group and the drumming group prevention programs were implemented in the music classroom because of the noise they produced, and the general prevention group was implemented in the regular classroom. The three groups took place weekly for 45 minutes during school days, for 10 consecutive weeks. The purpose of all three groups was violence prevention, but the intervention types and the facilitators who led the groups were different. The non-music teacher took Group 1 (control group), the music teacher who collaborated with an experienced music therapist took Group 2 (therapeutic drumming group), and another music teacher who did not collaborate with a music therapist took Group 3 (drumming group). Groups 2 and 3 attended 10 consecutive weeks of in-school music-based violence prevention while Group 1 (control group) attended standard prevention classes (i.e., lecture-based) without music interventions during the same period of time, i.e., also 10 sessions over 10 weeks.

Group 1 (standard prevention group, control group).

This group received standard prevention classes led by the science teacher. The teacher was female with 15 years of teaching experience. The theme of each class was identified to participants. The program was lecture-based followed by completing a work sheet, then the participants had a discussion based on the work sheet they had filled out.

Group 2 (therapeutic drumming group).

The music teacher led the group with a music therapist as a consultant. The music teacher was female with 13 years of teaching experience. Prior to the beginning of the intervention, the music teacher participated in 21 hours of music therapy group sessions. These sessions were led by a music therapist who was both a US board-certified and

Korean certified music therapist. The sessions gave the teacher an opportunity to experience a group music therapy program and to learn about music interventions that can be used with middle school students in Korea. The therapeutic drumming prevention program was developed by the researcher, who is a US board-certified music therapist, and the program was discussed with the school music teacher who ran the program. Sessions were video recorded, and the music teacher and the music therapist met every week for one hour prior to the session; during these meetings they watched a video of the previous session, discussed the interventions, and provided feedback for the upcoming session. All the drumming interventions were related to the each week's theme of preventing aggression, and the students had a chance to discuss what they had experienced. The basic intervention techniques used are described below.

To improve anger management: Each student was asked to select and play Latin, African, and Korean percussion instruments—djembes, hand drums, sound shape drums, paddle drums, cowbells, agogo bells, wood blocks, and *buks* (Korean traditional stick drums). The group improvised the rhythm and sound, which was adapted to the drum circle technique. The teacher sometimes gave hand directions to make the sound softer or louder, to stop, to play the drum with a beat, or to rumble (i.e., to play without a beat). Sometimes the group was asked to improvise, expressing their emotions and stress without facilitation by the teacher.

The students were asked to play resonator bells, a type of percussive instrument for which each student had one note of a resonator bell. The group was divided into four sub-groups and each group had a different chord (C, A minor, D minor, and G chord groups). Following the teacher's keyboard accompaniment of chord progressions, each

group took a turn to play the resonator bell in order (C-Am-Dm-G). Then the students were asked to play the resonator bells freely, expressing their emotion that day. The group was then asked how they felt when each one played in harmony or improvised freely.

To control aggressive behavior and increase assertiveness skills: The students were asked to play the percussion drums. The group improvised the rhythm and sound, which was adapted to the drum circle technique. The teacher gave hand directions to make the sound softer or louder, to stop, to play the drum with a beat, or to rumble (i.e., to play without a beat). The teacher selected one student to be a leader and asked him or her to stop the group using hand signals, then selected a few more students to take turns being the leader. The students were divided into dyads, so each student had a partner. One of the students held drumsticks while the other student held the drum. In Kornblum's (2006) body-based violence prevention curriculum, a student walked towards his or her partner until the partner said "stop." Adapting this activity, a student who had a drumstick stood some distance away from his or her partner and then walked to the partner until the partner said, "stop." The students who had drumsticks played their drums until their partners said "stop." Partners then exchanged roles. The group was asked how they felt when each one was leading and responding.

To improve empathy: One student was selected as leader and asked to play his or her improvised rhythm, which the rest of the group members echoed back (a call-and-response type activity). The leader then played two beats at first, and then extended to play sets of four beats; the leader could also change the volume. The leader, who was selected by the teacher, then improvised without a structured beat, and the rest of the

group played their drums with a matching beat and reflected the leader's expression.

Kornblum's (2006) body-based violence prevention curriculum was adapted for use with drumming to reflect others' physical tension by drumming the volume and tempo. The students were divided into dyads. One partner expressed the physical tension of his or her hands and arms, and the other partner played the drum, reflecting the tension by controlling the volume and tempo. Partners then exchanged roles. The group was asked how they felt when each one was the leader and the responder.

To increase awareness of others and to support team building: The group was asked to play boom whackers (percussive instruments) and each student had two notes. The group was divided into three sub-groups, each with a different chord. The sub-groups played different parts of a 12-measure blues piece. While playing the boom whackers, the group was asked to express their stress and anger. Then the group was asked to play while trying to listen to others' playing. The group was asked how they felt when they played expressing their stress and anger, and when listening to others playing.

The group played Nanta, a type of drum activity (adapted from Korean traditional group drumming) using buk and other stick drums. The group was asked to play a certain beat together, following the written notes. The group was given simplified sheet music, which used white and black circles and square shapes of different sizes. The notes represented whether the center or edge of the drum was played (squares = playing the edge of the drum), as well as the volume of the drum (black circles = loud; white circles = soft; differences in the size of the symbols signify greater or lower volume). The activity was a modified version of the Nanta that could be read more easily by beginners. The group was asked how they felt when they played the drum simultaneously.

Group 3 (drumming group)

A music teacher also led the drumming group, but without a music therapist's consultation and using only a music education approach. The music teacher was a female with 10 years teaching experience. The group experienced drumming with the same instruments as Group 2, but the activities were strictly music-education based. The participants were taught how to play the percussion instruments, how to play certain rhythms, and how to match certain music in the music text book. In order to play the drum successfully as a whole group, practice time was given in every class.

Data Analysis

In the first phase, SPSS (Statistical Program for the Social Science) version 21.0 was used to analyze the results of the K-AQ and its four subscales (physical aggression, verbal aggression, anger, and hostility). A mixed ANOVA with 1 repeated factor and 1 between groups factor was conducted to look for any statistically significant differences among the three groups (control group, therapeutic drumming group, and drumming group) or due to time between pre-and post-test, or the interaction of group and time. The total K-AQ scores and each of the subscales were examined in mixed models by time, group, and the interaction of time by group.

The qualitative data were analyzed by modifying Tesch's (1990, pp. 142-145) method:

1. Read the transcriptions carefully and write down the sentences if some ideas come to mind.
2. Pick one interview transcription and write thoughts about the underlying meaning.
3. Complete this task for several participants then make a list of the topics to cluster together with similar topics.

4. Abbreviate the clusters as codes then write the codes.
5. Find the most appropriate words for the topics and turn them into categories.
6. Make a final decision on the abbreviation for each category.
7. Assemble the data descriptions belonging to the category in one place.

CHAPTER 4

Results

This study examined the effects of a therapeutic group drumming intervention on school violence prevention in middle school students. Participants were the whole third year classes of an urban middle school in Daegu, the third largest city in Korea. The school was located close to downtown in a lower and middle socioeconomic level residence region. The age range was 14 to 15 years old ($N = 231$, $M = 14.26$, $SD = .44$); both male ($n = 115$) and female ($n = 116$) students participated. All participants were Korean and Korean was the first language for them. For the quantitative measurement, a measure of aggression and its subscales--physical aggression, verbal aggression, anger, and hostility-- were compared for the general prevention group, therapeutic drumming group, and drumming group. Furthermore, qualitative data were obtained from interviews and written surveys and analyzed as follows.

Quantitative Analysis

The therapeutic drumming intervention group had the greatest positive change on total K-AQ scores (6.25) and on all subscales of aggression (Table 3). The control group had the next greatest positive change on total K-AQ scores (3.86) and all subscales of aggression. The drumming group had the least positive change on total K-AQ scores (1.02) and all subscales of aggression. Table 3 depicts the means and standard deviations for pre- and post-tests, and a difference of pre- and post-mean scores on the subscales of the Aggression Questionnaire.

Table 3.

Comparison of Means and Standard Deviations Over Time on the Subscales of the Aggression Questionnaire (N = 231).

	Pre		Post		Pre <i>M</i> – Post <i>M</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Control group (<i>n</i> = 70)					
Total aggression	61.86	12.76	58.00	12.58	3.86
Physical aggression	19.54	5.82	18.16	5.01	1.38
Verbal aggression	12.56	3.18	11.89	3.11	0.67
Anger	11.97	2.97	11.41	3.00	0.56
Hostility	17.79	5.11	16.54	5.23	1.25
Therapeutic drumming group (<i>n</i> = 65)					
Total aggression	56.57	12.34	50.32	9.53	6.25
Physical aggression	17.14	4.54	15.40	3.53	1.74
Verbal aggression	11.85	3.01	10.82	2.28	1.03
Anger	11.55	2.66	10.49	2.10	1.06
Hostility	16.03	5.07	13.62	4.18	2.41
Drumming group (<i>n</i> = 96)					
Total aggression	55.02	11.13	54.00	13.21	1.02
Physical aggression	16.83	4.47	16.71	5.03	0.12
Verbal aggression	11.25	2.53	11.03	2.85	0.22
Anger	11.27	2.63	11.23	2.88	0.04
Hostility	15.67	4.93	15.03	4.82	0.64

To examine the effects of group on middle school students' aggression level, a mixed ANOVA was conducted. The between subjects factor was group difference (type of intervention: control, therapeutic drumming, or drumming group). The repeated-subjects factor was time (pre-test and post-test). There were significant group differences ($F = 7.38, p < .01, \eta^2 = .061$), and time differences ($F = 26.52, p < .001, \eta^2 = .104$) on total K-AQ scores. Results showed a significant effect of the Group \times Time interaction on total K-AQ scores ($F_{(2,228)} = 4.65, p < .05, \eta^2 = .039$; Table 4, Figure 1). Although the therapeutic drumming group had the greatest reduction in total aggression score, post hoc analysis revealed that there were no significant differences between the therapeutic drumming group and the control group; however, the drumming group demonstrated significantly less change than the other two groups.

Table 4

Total Aggression Questionnaires (K-AQ) Scores by Time and Group (N = 231)

	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	η^2
Group	3424.60	2	1712.32	7.38**	.061
Time	1543.47	1	1543.471	26.52***	.104
Group \times Time	542.00	2	271.00	4.65*	.039
Error	13266.29	228	58.18		

* $p < .05$, ** $p < .01$, *** $p < .001$

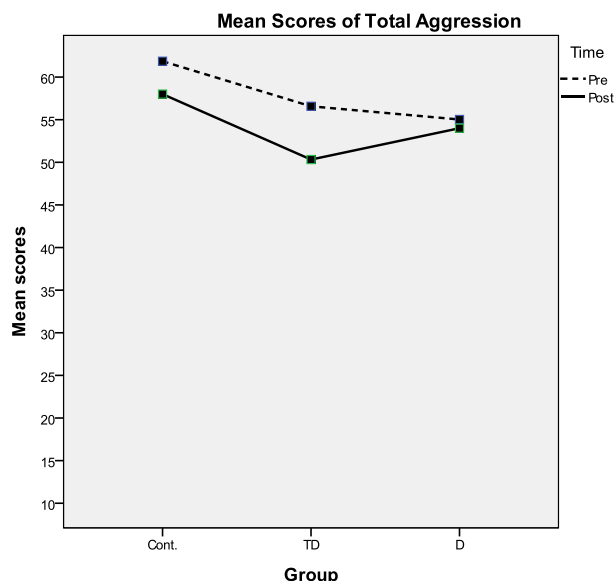


Figure 1 *Total Aggression Questionnaires (K-AQ) Scores by Time and Group*

Cont.: Control
 TD: Therapeutic Drumming
 D: Drumming

The analysis of physical aggression yielded a significant main effect of Group ($F = 7.15, p < .01, \eta^2 = .059$), and Time was also significant ($F = 14.22, p < .001, \eta^2 = .059$). Results also showed a significant effect of the Group \times Time interaction on physical aggression ($F_{(2,228)} = 3.21, p < .05, \eta^2 = .027$; Table 5, Figure 2). The therapeutic drumming group had the greatest reduction in physical aggression score, the control group had the second greatest, and the drumming group had the smallest reduction. Post hoc analysis revealed that there were no significant differences between the therapeutic drumming group and the control group; however, the drumming group demonstrated significantly less change than the other two groups.

Table 5

Physical Aggression K-AQ Sub-Scale Scores by Time and Group (N = 231)

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	η^2
Group	527.48	2	263.74	7.15**	.059
Time	131.67	1	131.67	14.22***	.059
Group \times Time	59.50	2	29.75	3.21*	.027
Error	2110.82	228	9.25		

* $p < .05$, ** $p < .01$, *** $p < .001$

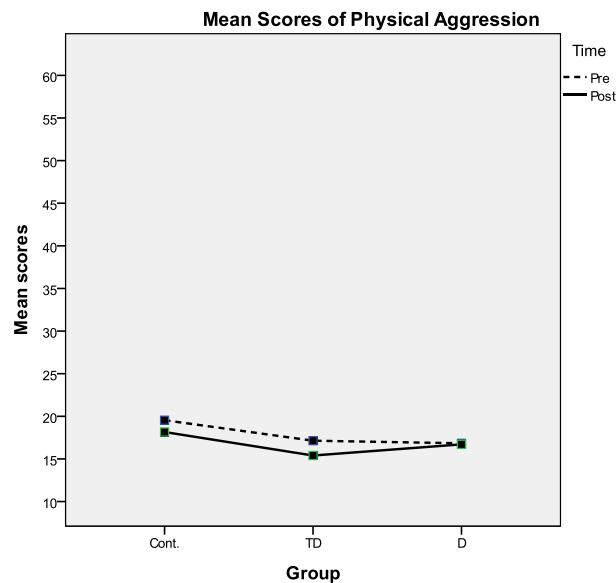


Figure 2. *Physical Aggression K-AQ Sub-Scale Scores by Time and Group*

Cont.: Control
 TD: Therapeutic Drumming
 D: Drumming

The analysis of verbal aggression scores indicated significant differences by group ($F = 4.08$, $p < .01$, $\eta^2 = .059$), and time ($F = 12.37$, $p < .01$, $\eta^2 = .051$) on the

verbal aggression K-AQ sub-scale; however, no significant effect was found for the Group \times Time interaction ($F_{(2,228)} = 1.76, p > .05, \eta^2 = .015$; Table 6, Figure 3). Post-hoc analysis for the group revealed that there were no significant differences between the therapeutic drumming group and the control group, and therapeutic drumming group and drumming group. However, the control group demonstrated significantly lower than the drumming group.

Table 6

Verbal Aggression K-AQ Sub-Scale Scores by Time and Group (N = 231)

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	η^2
Group	101.16	2	50.58	4.08*	.059
Time	46.02	1	46.02	12.37**	.051
Group \times Time	13.15	2	6.57	1.76	.015
Error	847.89	228	3.71		

* $p < .05$, ** $p < .01$, *** $p < .001$

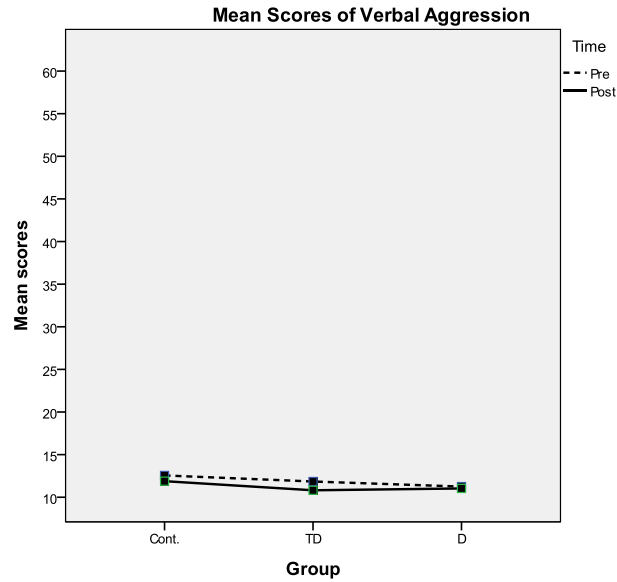


Figure 3. *Verbal Aggression K-AQ Sub-Scale Scores by Time and Group*

Cont.: Control,
 TD: Therapeutic Drumming
 D: Drumming

For anger, the analysis yielded significant differences for Time ($F = 9.14, p < .01, \eta^2 = .039$) but not for Group ($F = 1.41, p > .05, \eta^2 = .012$) on the anger K-AQ sub-scale K-AQ. The results did not show a significant effect of the Group \times Time interaction ($F_{(2,228)} = 2.71, p > .05, \eta^2 = .023$; Table 7, Figure 4). So anger changed for all participants between pre and post-test regardless of intervention type.

Table 7

Anger K-AQ Sub-Scale Scores by Time and Group (N = 231)

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	η^2
Group	31.86	2	15.93	1.41	.012
Time	34.38	1	34.38	9.14**	.039
Group \times Time	20.41	2	10.21	2.71	.023
Error	857.42	228	3.71		

* $p < .05$, ** $p < .01$, *** $p < .001$

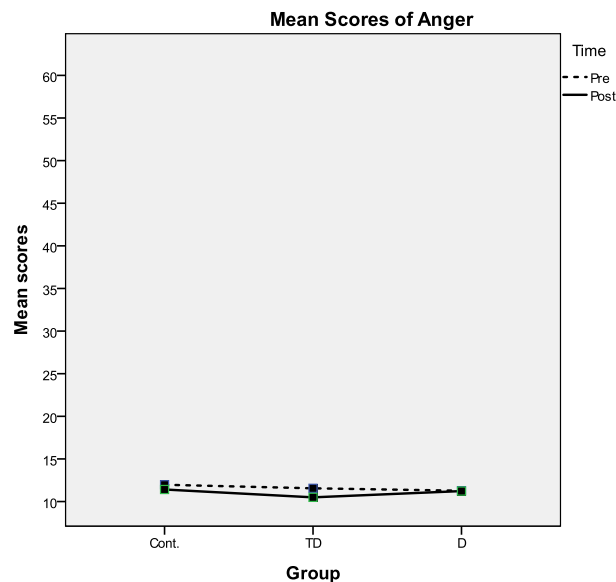


Figure 4. *Anger K-AQ Sub-Scale Scores by Time and Group*

Cont.: Control

TD: Therapeutic Drumming

D: Drumming

The effect of Group (type of intervention) was significant ($F = 5.49, p < .01, \eta^2 = .046$), and Time was also significant ($F = 23.70, p < .001, \eta^2 = .094$) on the hostility subscale. Results suggested a significant effect of the Group \times Time interaction on hostility ($F_{(2,228)} = 3.18, p < .05, \eta^2 = .027$; Table 8, Figure 5). The therapeutic drumming

group had the greatest reduction in hostility score, the control group had the second greatest, and the drumming group had the smallest reduction. Post hoc analysis revealed that there were no significant differences between the therapeutic drumming group and the control group; however, the drumming group demonstrated significantly less change than the other two groups.

Table 8

Hostility K-AQ Sub-Scale Scores by Time and Group (N = 231)

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	η^2
Group	422.60	2	211.30	5.49**	.046
Time	229.94	1	229.94	23.70***	.094
Group \times Time	61.69	2	30.85	3.18*	.027
Error	2211.44	228	9.69		

* $p < .05$, ** $p < .01$, *** $p < .001$

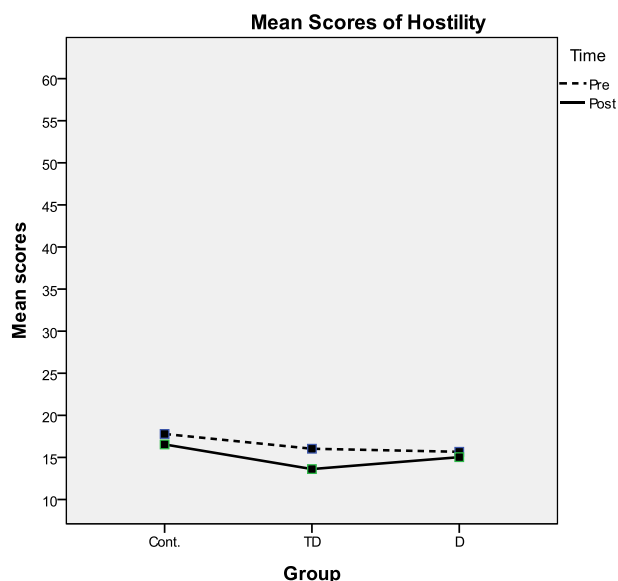


Figure 5. *Hostility K-AQ Sub-Scale Scores by Time and Group*

Cont.: Control
 TD: Therapeutic Drumming
 D: Drumming

The results suggested a significant Group \times Time interaction on K-AQ total scores and on physical aggression and hostility sub-scale scores, with no significant differences on verbal aggression and anger sub-scale scores. Post hoc analysis revealed that the therapeutic drumming group showed more reduction in total aggression, physical aggression, and hostility compared to the drumming group. The control group also showed more reduction in total aggression, physical aggression, and hostility than the drumming group. However, no significant differences were found between the therapeutic drumming group and the control group. For the subscale of anger, all participants reported decreased anger between pre and post-test, regardless of group, however, since the changes were very small and the sample was so large ($N = 231$), it would be hard to argue that these were significant. In the verbal aggression subscale,

group was significantly different and time was also different, however, no interaction was found between time and group.

Qualitative Analysis

Ten participants (Female = 4, Male = 6) were selected from the therapeutic drumming group for interviews to obtain qualitative data, to examine how they experienced the program by varied aggression status. The school class teacher was asked to recommend three to four participants in each high, moderate, and low aggression levels. The researcher also asked the class teacher to recommend the students for interviews who were able to express their thoughts and feelings verbally with sentences following the open-ended questions. A total of ten participants were selected for interview: high ($n = 3$), moderate ($n = 4$), and low ($n = 3$).

A total of 332 meaningful statements were derived from the interviews with 10 members of the therapeutic drumming group. The number of meaningful statements for each interviewee is given in Table 9.

Table 9

Interviewees' Number of Meaningful Statements (n =10)

Interviewee	Gender	K-AQ score	Aggression level	Meaningful statements
A	F	37	Low	32
B	F	93	High	25
C	M	38	Low	26
D	M	40	Low	35
E	M	82	High	31
F	M	53	Middle	32
G	M	52	Middle	24
H	M	80	High	49
I	F	52	Middle	37
J	F	53	Middle	41
			Total	332

Note. High K-AQ scores (61–93); Middle K-AQ scores (51–60); Low K-AQ scores (37–50)

Since the participants answered with short written responses, only 160 meaningful statements were yielded from the written survey comprising open-ended questions that was given to members of the therapeutic drumming group ($n = 55$). A total of 492 meaningful statements were yielded from the survey and interviews, and these statements were categorized into seven themes: somatic responses to drumming, emotional processing, group cohesion, empathy, relationship with peers, self-esteem, and

self-regulation. Each category had three to four subcategories and the percentage of the statements in each category in relation to the total number of statements was calculated (See Table 10 and Figure 5).

Table 10

Qualitative Data Analysis Categories and Subcategories

Category	Subcategory	Number of statements		
		survey	interview	Sum
Somatic responses to drumming	Bring physical responses	2	13	15(3.0%)
	Providing auditory feedback	3	8	11(2.2%)
	Experiencing noise	5	7	12(2.4%)
	Sub-total			38(7.7%)
Emotional processing	Enjoyment	17	34	51(10.3%)
	Being relieved	10	15	25(5.1%)
	Esthetic feeling	2	5	7(1.4%)
	Expressing anger or repressed feelings	22	46	68(13.8%)
	Sub-total			151(30.7%)
Group cohesion	Harmonization	8	29	37(7.5%)
	No one excluded	6	12	18(3.7%)
	Listening or paying attention to others	6	13	19(3.9%)
	Sub-total			74(15.0%)
Empathy	Understanding others' situations	18	30	38(7.7%)
	Experiencing empathy from peers	4	17	21(4.2%)
	Awareness of others	2	6	8(1.6%)
	Sub-total			67(13.6%)
Relationship with peers	Get to know peers better	27	38	65(13.2%)
	Increasing communication between peers	4	7	11(2.2%)
	Enhancing relationships with peers	3	8	11(2.2%)
	Sub-total			87(17.7%)

Self-esteem	Feeling of accomplishment	2	16	18(3.7%)
	Assertiveness	4	8	12(2.4%)
	Leadership	2	4	7(1.4%)
			Sub-total	37(7.5%)
Self-regulation	Managing emotions	3	5	8(1.6%)
	Managing behaviors	7	14	21(4.3%)
	Accepting differences of others	3	6	9(1.8%)
			Sub-total	38(7.7%)
Total		160	332	492(100%)

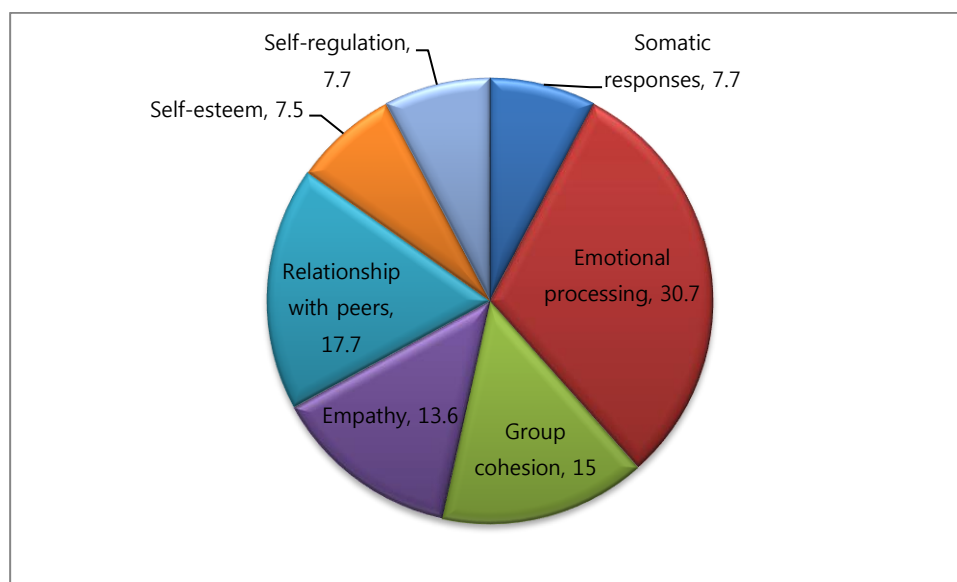


Figure 6. *Percentage of Qualitative Data Analysis Corresponding to the Seven Categories*

The seven categories and example meaningful statements are described below:

Theme 1: Somatic response to drumming

The first category was somatic experiences of drumming (7.7%), for which the subcategories were: bringing physical responses (3.0%), providing auditory feedback

(2.2%), and experiencing noise (2.4%). The interviewees reported that playing the instruments helped to arouse physical responses. Tactile and audio feedback of the vibrations was activated directly from striking the instruments. These experiments enhanced motivation to move forward and focus on the activities. Below are some examples of interviewee statements:

“I played the drum without any intention, but my body knew what am I supposed to do” (Interviewee H)

“I played whatever I want to do and I could hear the sound that I played. It was awesome. I wanted to keep playing” (Interviewee B)

“I could touch and feel the instruments using my hands, which made me more connected with me” (Interviewee C)

Some female interviewees complained about *experiencing noise* (2.4%); while male interviewees seemed to enjoy playing the instrument.

Theme 2: Emotional processing

The second category emotional processing (30.7%) comprised the highest percentage of the statements. It was made up of the four subcategories: enjoyment (10.3%), being relieved (5.0%), esthetic feeling (1.4%), expressing anger or expressing repressed feelings (11.1%). For the subcategory of enjoyment, interviewees reported that making music through drumming activities was more like playing than like studying or learning, and that this playing type of experiential activity helped the interviewees understand school violence prevention better.

“I feel like what we did was more like playing than studying because it was so fun [...] but it was interesting that I could understand and learn more about school violence prevention” (Interviewee B)

Being relieved implied that the interviewees felt relaxed during drumming. One interviewee described the power of drumming experiences:

“I could play whatever I wanted during free drumming activity. It was so fun and I felt much better after striking the drum. At first my stress came up in my mind during drumming but gradually changed [...] I felt comfort and calmed down” (Interviewee C)

Another interviewee described:

“I usually feel something block me, but I felt the block fade away with the sound when I hit the drum” (Interviewee A)

The opportunity to play and stop drumming simultaneously brought the interviewees esthetic feelings. Here are some example statements of this feeling:

“I had goose bumps when we stopped and played the drum all together” (Interviewee A)

“Especially the sound when all our classmates matched the rhythm was so special” (Interviewee B)

All interviewees who were interviewed agreed that there was a benefit from expressing anger or repressed feelings. Sixty-eight (13.7%) statements supported the theme, and all participants reported that this happened unintentionally. The stressors that the interviewees brought into drumming were relationship problems with peers or teacher,

stress related to tests, and stressors that were not identified by the interviewees. The following statements support this theme:

“I did not even think about my stress, but I could express my stress unintentionally while playing the drum. I just hit the drum following the rhythm. And I realized that I was expressing my stress in spite of myself” (Interviewee 5)

“I could express negative memories with my previous teachers, repressed feeling from relations with my friend and stress from tests” (Interviewee 7)

“I did not intend to, but suddenly an angry feeling came up and I felt like my anger was transferred to hitting the drum” (Interviewee 8)

Theme 3: Group cohesion

All of the interviewees who were interviewed, and many of the interviewees who completed the written survey, reported the benefits of group drumming, as it offered the opportunity to contribute to group cohesion. Eighty-two (16.6%) statements were under this category.

Harmonization (7.5%) was the highest subcategory among group cohesion, as the interviewees recognized that group drumming contributes to building healthy community. During the process of group drumming, the interviewees experienced becoming unified as a group. A well-matched sound seemed to be recognized as a sign of well-matched minds by interviewees:

“When someone led the group, we all followed the leader’s direction or rhythm. We were unified, it was amazing experience because we were all playing and making the same rhythm” (Interviewee A)

“Wow, we matched well! I felt like we were one and well harmonized. I think it was possible because we all tried to be considerate and accept others’ mistakes”

(Interviewee J)

“Because we tried to match the sound, our minds also matched well” (Interviewee I)

For no one excluded, statements indicated that the interviewees who were alienated and timid all had equal opportunity to participate. Those experiences offered them the chance to express their personalities, which usually were not represented:

“I was surprised, when one of the classmates participated actively and played the drum loudly when it was her turn to play because she was usually shy and quiet. We all contributed our parts equally” (Interviewee J)

“No one [was] left out and we all were having fun and laughing” (Interviewee G)

For listening or paying attention to others (3.8%), statements indicated that the interviewees experienced and observed, that they tried to listen, even to classmates towards whom they had hostility, because motivation for listening to others occurred to get successful auditory feedback. Some groups practiced drumming voluntarily when they got free time from the teacher. During that time interviewees reported that the group paid attention to each other’s sound. The following statements support this theme:

“It was interesting watching the classmate who usually has a hard time concentrating on others had made an effort to concentrate to match the sound with other classmates”

(Interviewee E)

“When the teacher gave us free time, even though the teacher did not ask us to practice, we practiced voluntarily to match the rhythms. We tried to listen to each others’ sound to hear the sounds matched” (Interviewee I)

“I tried to listen to the classmate who I did not like. I felt like I had to listen and match the rhythms with him” (Interviewee F)

Theme 4: Relationship with peers

The fourth category, relationship with peers (17.6%) was made up of three subcategories: get to know peers better, communication between peers, and enhancing relationships with peers. Overall, the majority of interviewees described improvement in peer relationships and community through group drumming.

For get to know peers better, the statements implied that the interviewees had opportunities to listen to unfamiliar peers’ stories, followed by leading the drumming group based on the peers’ stories. The example statements were described as follows:

“I could have a chance to listen to the classmate’s story that I did not know well. When I played the drum following his directions based on the stories, I got to know a different side of him.” (Interviewee J)

“The fun activity with rhythms and music helped us to get to know each other.”
(Interviewee B)

For communication between peers, the interviewees reported increasing communication with peers during and after the group drumming activities. The communication appeared verbally while exchanging the instruments between peers, as well as playing the drum non-verbally. After the group drumming class, some interviewees reported that they initiated communication more:

“I usually do not talk to people that I am not close to, but during the drumming activities I realized that I was talking to classmates who were not close to me”
(Interviewee I)

“After the class was done, I talked to the classmate who presented his story followed by the drum playing. I became curious and wanted to have a conversation with him” (Interviewee J)

For enhancing relationships with peers, the interviewees indicated that their relationships became closer and that they recognized different sides of their peers through music making.

Theme 5: Empathy

Empathy (13.8%) was the next category, made up of understanding others' situations (7.7%), experiencing empathy from peers (4.2%), and awareness of others (1.6%). The interviewees reported they had chances to empathize with others and to receive empathy from classmates. Both experiences were important in terms of increasing empathy. For understanding others, the meaningful statements were as follows:

“When my classmates expressed their anger and stress by drumming and explained why they played that way, I could understand more of them [...]. I thought I was the only who suffered from something, but I realized that they also had hard times with the same issues as me. I felt the same” (Interviewee D)

“One time, a classmate who I did not like was a leader. I could hear her stress by her sound and explanations. It was about her parents' divorce. At first, I didn't like to follow her playing, but as I know she has similar stress issues as mine, following her direction was not bad” (Interviewee G)

“Experiencing empathy from peers” was indicated as a therapeutic experience, even when the interviewees only listened and followed an individual's direction or playing. The feeling of being empathized with occurred in non-verbal situations. Two

interviewees who had experienced being bullied expressed that it was the first time that all of their classmates were listening to him:

“Everyone looked at me and I felt they were all ready to listen me. I already felt safe to do anything I want and be understood” (Interviewee F)

“When my classmates imitated and followed my sound, I felt they listened to my story and empathized. I think that was the first moment that everybody listened to me” (Interviewee H)

Theme 6: Self-esteem

The sixth category was self-esteem. This category was made up of feelings of accomplishment, assertiveness, and building leadership. Although the intervention was group-centered activities, the interviewees indicated they experienced feelings of accomplishment, as if they had made individual accomplishments through well-matched playing. The example statements are below:

“When our group matched the rhythm playing successfully, I felt so much accomplishment for myself” (Interviewee F)

“Even if the classmates did not follow my direction exactly, I felt satisfaction because I know they tried to follow me” (Interviewee H)

For Assertiveness, statements indicated that the group drumming intervention provided opportunities for interviewees who lacked confidence to express themselves assertively. Interviewee H, who had experienced being bullied, expressed that it was the first time in his life that he was able to express his thoughts in front of the class:

“I haven’t expressed my thoughts in front of my class. It was the first time I was able to express my real thoughts to the class assertively. I felt safe enough when I talked about my anxiety to my class” (Interviewee H)

“It was awesome that everybody followed my direction saying ‘stop.’ I could say several times ‘stop’ with confidence” (Interviewee I)

Theme 7: Self-regulation

Self-regulation is the last category. This category involved managing emotion and managing behaviors. Through the group drumming intervention, the interviewees indicated improvements in identifying emotions, which helped them to manage their emotions and behaviors. Almost all interviewees reported building self-regulation at the end of the intervention. Here is an example statement of managing emotion:

“Almost the end of the semester, when I played the drum loudly and softly, I started to realize how much I got stressed or angry. It helped me to manage my emotions” (Interviewee J)

For “managing behaviors,” statements indicated that the interviewees who demonstrated aggressive behaviors found controlling their behaviors in response to others’ directions was sometimes difficult:

“I did not want to stop playing and follow the direction. I wanted to play more. I thought, ‘Why I should follow the classmates’ directions?’... However, I tried hard to stop whenever I needed stopping” (Interviewee F)

Another interviewee stated:

“I felt my aggressive behavior reduced because I felt much better after hitting the drum as much as I could” (Interviewee B)

The qualitative data indicated that therapeutic group drumming may enhance emotional processing, group cohesion, empathy, relationships with peers, self-esteem, and self-regulation; these enhancements may contribute to reducing violence in a middle school in Korea. The participant who was identified as an aggressive student (Interviewee H) identified drumming as an emotional pathway, and the participant who was identified as being at risk of being bullied expressed feelings of assertiveness and self-esteem (Interviewee F). Therefore, depending on the participants' specific needs and feelings, the experiences of therapeutic drumming were varied.

CHAPTER 5

Discussion

This study investigated how therapeutic group drumming influences students' aggression and narrative experience as related to school violence prevention. The Aggression Questionnaire (Korean Version) K-K-AQ was used to gather quantitative data, and structured interviews and paper-and-pencil open-ended question surveys were used for the qualitative data collection. Quantitative data were obtained from participants of general prevention classes, therapeutic group drumming classes, and group drumming classes. Although participants in all three groups reported reduced aggression scores, the results demonstrated that those in the therapeutic drumming group had a greater reduction in aggression scores and its subscales of physical aggression and hostility compared to the drumming group. Post-hoc analysis revealed that the therapeutic drumming group had a more significant positive effect than the drumming group, and there was no significant difference between the therapeutic drumming group and general prevention group. Group drumming itself has been recognized as positive activity in enhancing students' social-emotional functioning (Ho, Tsao, Bloch, & Zeltzer, 2011), anger management (Slotoroff, 1994), self-esteem, leadership skills (Mikenas, 2003; Sharma & Jagdev, 2012), peer relationships (Wyatt, 2000), and active listening for building a healthy community in schools (Camilleri, 2002). However, depending on the way drumming interventions are conducted, the results may vary. The possible reasons for that the therapeutic drumming group intervention was more effective than the drumming group to reduce aggression are as follows:

First, while the drumming group was more focused on group playing and educative based approaches to play successfully as a group, during the therapeutic drumming group the participants had chances to get individual attention from the whole group (e.g., each student had to play the drum synchronically with his or her partner during dyadic playing activity, and each student had the opportunity to explain reasons and thoughts followed by his or her playing). This finding supported Koka, Engel, Kirschner, and Keyser's (2011) study which used the results of a fMRI scan to show dyadic and synchronizing drum playing activated the part of the brain that was in charge of prosocial behaviors. Through dyadic and synchronized drum playing, individuals had opportunities to get individual attention from others. The therapeutic drumming group allowed every classmate to concentrate on each student's sound or movement at least one time in each session, while students who belonged to the drumming group had to listen to the sound as a whole group most of the time, not to individual sounds. The active listening of each other's sound interactively might occur during dyadic synchronizing drumming and it enhanced prosocial behaviors. Therefore, if an individual was synchronized by others, the part of the brain that is in charge of prosocial behavior was activated. As prosocial behaviors have been associated with reducing aggressive behaviors of middle school students (Espelage et al., 2013), the therapeutic drumming group's aggression level might thus have been significantly reduced compared to the drumming group. The qualitative data also indicated that during therapeutic drumming, the participants experienced empathy from peers and understanding of others. The empathy reduced hostility towards peers. Several participants reported that when their classmates imitated and followed individuals' sounds, they felt all classmates listened to

individuals' stories and empathized, even if the sound was made by one whom they did not like.

Second, the music teacher who led the therapeutic drumming group collaborated with the music therapist from planning to evaluate the interventions, whereas the music teacher who led the drumming group did not. As mentioned in a previous chapter, Seung (2013) surveyed 504 teachers from elementary, middle, and high schools in Korea; only 2.5% of school teachers use music as the medium for school violence prevention even though 79.2% of the teachers agreed that music might be possible mediums for school violence prevention. Very few school teachers reported they used music for school violence prevention programs, although they believed in its effectiveness, because school teachers had difficulty with integrating music activities for the purpose of school violence preventions. In the present study, the drumming group was less effective than a therapeutic drumming group because the group drumming music teacher might also have had difficulties integrating music activities and school prevention programs. Carter (2011) pointed out the importance of the role of school music teacher because teachers had longitudinal relationships with students and the teachers had musical skills that the students felt familiar with. If the school music teacher becomes familiar with school violence policies and musical intervention, the students might greatly benefit for the purpose of school violence prevention. In these aspects, the collaboration between music therapists and music teachers in school settings might bring a synergetic effect for preventing school violence (Shafer & Silverman, 2013).

Third, the therapeutic drumming group provided a safe and positive climate, as there were no right or wrong answers (Maschi & Bradley, 2010). When a classmate had a

turn to play, the rest of the classmates had to react following the individual's playing. As one of the participants (Interviewee F) who had experience of being bullied reported to the school teacher, he felt safe to play the drum and express his thoughts because the group was ready to listen and concentrated on him. He also expressed that it was a first time that he could speak his thoughts in front of his class in his life.

The intervention for this study was a form of universal strategies in that the intervention was provided to whole classes or whole school (Bronfenbrenner, 1979; Newman et al., 2000; Shechtman, 2006; Shechtman & Ifargan, 2009). One of the advantages of the universal strategies was that students might feel more supported and accepted in class because the aggressive students were not discriminated against by the school system, as the aggressive students sometimes were placed in a separate treatment group (called *selective strategies* of school violence prevention). However, one of the disadvantages was that highly aggressive students might experience rejection in highly structured classrooms because their inappropriate behaviors become deviant in the class (Dodge, 2006). The therapeutic group drumming provided acceptance and a safe climate to every participant when individuals had a turn to play, whereas the drumming group provided highly structured and rule-oriented drumming so that the class was educated about playing the drum in certain ways. In the present study, the participants learned mainly prosocial behaviors and relational skills during the experiment periods by the school music teacher who lead the group. The teacher was supervised by the experienced board certified music therapist to provide a safe and supportive environment for the participants. Feeling unsafe promotes students to engage in aggressive behavior (Camilleri, 2002); in other words, if the students feel a positive and safe climate in their

class, the aggressive behavior should be reduced. Therefore, the aggressive scores might be significantly lower in the therapeutic drumming group than the drumming group.

Fourth, the quantitative result of hostility, a subscale of total aggression, was significantly lower in the therapeutic drumming group than the drumming group. This result is supported by qualitative data whereby the participants of the therapeutic drumming reported that it helped them enhance group cohesion and relationships with peers. Hostility against another person is one form of aggression (Christner, Friedberg, & Sharp, 2006). As Wyatt (2000) explored the effects of group drumming on improving peer relationships, the participants in this study expressed that they got to know peers better, and enhanced relationships and communication with peers through therapeutic drumming. The participants paid attention to their classmates' sounds and stories even though they reported feeling hostility; this allowed the participants to get to know and understand peers better. The positive effect of the therapeutic drumming was that it helped the participants to listen to their peers' sound actively, even though they disliked them. It promoted building group cohesion in school settings (Moore & Ryan, 2006). Because each student had equal chances to be a leader to make one's sound, the participants expressed that no one was excluded in the activities. Increasing non-verbal and verbal communication during and after the intervention made connections, and created a healthy community in a non-threatening way (Camilleri, 2002).

Fifth, the quantitative result of physical aggression, a subscale of total aggression was more reduced in the therapeutic drumming group than in the drumming group. The qualitative data supported the quantitative results. The participants expressed that the drumming experience enhanced more physical responses than they expected because

tactile and audio feedback of the vibrations followed directly after playing the instruments, and that satisfied them. Rodocy and Boyle (1997) and Gardner (1990) explained that drumming creates notable sound waves that directly penetrate drum players' bodies through instruments, mallets, or air. This body sensation impacted the participants' awareness of emotion and managing their behaviors (Watson, 2002), so the physical aggression scores were thus reduced.

In all three groups the anger subscales were decreased following the programs, and there were no statistical differences for all three groups (therapeutic drumming group, drumming group, and general prevention group). Although the types of interventions using drumming activities were different in the therapeutic and educative approach, drumming experiences in themselves helped to reduce anger. As stated earlier, the tactile and audio feedback of drumming made the participants connect the act of instrument playing to emotional expression (Watson, 2002) during both the therapeutic drumming intervention as well as education-centered drumming approaches. This result supported Currie's (2012) finding that students who had aggressive behavior problems and lack of anger management tend to have difficulty expressing their emotions verbally; however, the drumming experience can bridge their inner experience and physical experience, which helps the students identify their emotions and speak out by drumming. This enables them to manage their anger (Currie, 2012). This finding has also been supported in Bittman et al.'s (2003; 2009) studies about the positive effects of drumming experiences for reducing adolescents' stress and repressed feelings. The results of Suh's (in press) pilot study with high school male students in drumming groups indicated that only the anger subscale in K-AQ was significantly reduced compared to the control group

(no intervention), even though the number of interventions was only four. The result of the pilot study indicated that the drumming experience itself brought positive emotional changes, especially reducing anger regardless of the number of interventions and type of interventions. The qualitative data showed that the highest percentage of the meaningful statements were about emotional processing, mainly anger management. The participants reported that they had opportunities to express negative emotions including anger and repressed feelings, which relieved their negative emotions. Most of the interviewees indicated that they expressed their anger and repressed feelings unintentionally while drumming, as the anger was transferred while hitting the drum. The qualitative data showed that some participants reported the drumming activities helped them to identify their emotions, which helped to manage their emotions and behaviors.

There was no significant difference between the general prevention group and the therapeutic prevention group in aggression. This result was different from Suh's (in press) pilot study, in which only anger, one of the subscales of aggression, became statistically reduced in the therapeutic drumming group, compared to the general prevention. The different result might be because of who was facilitating the interventions. In the pilot study, a professional music therapist facilitated the therapeutic group, whereas a school music teacher facilitated the intervention group, followed by the music therapist's consultations in the present study. The therapy setting is more focused on an individual's needs and personal subject matter; in education, the subject matter is more general (Bruscia, 2014). Even though the music teacher who ran the therapeutic drumming group in this present study received consultation from the music therapist, the music teacher's approaches was more focused on educative goals compared to the music

therapist's approaches in the pilot study. As identifying individual's emotional status was reported to help anger management (Slotoroff's, 1994), the therapist was trained to be more focused on the individual's emotional status than the school music teacher. Therefore, if the school setting wants the students to reduce anger as well as negative emotional status, more therapeutic approaches would be necessary. Drum playing was reported to assist aggressive and angry male adolescents to symbolize their negative feelings of inner experience, and bridges between the physical experience of anger and the ability to speak about their experience (Currie, 2012). However, how and how much they could express their anger could vary depending on cultural difference. Previous studies have revealed that Asians are less expressive than the European American students (Mesquita, 2001; Roseman, Dhawan, Rettek, Naidu, & Thapa, 1995). Especially, Korean adolescents are less likely to express anger since expression of anger is considered inappropriate (Park et al., 2010). If the environments are not safe enough for expressing their anger or negative emotional status, the students might hardly express their emotion. The students have to act in an appropriate way such as not to express their negative emotions in the school especially in front of the school teacher. In the present study, even though the students were asked to express their emotions by playing the drums, the students might have a limitation on expressing their negative emotions in front of the school teachers. In the pilot study, a music therapist facilitated the group, and the anger scale was reduced because not only did the therapist not belong to the school but also therapists had trained to focus and to help individual to express emotional status. The prevention strategy in the present study was a universal approach which was for all students in the school. However, if a school wants to help the students with a high level

aggression to reduce their problematic behaviors, professional therapists should be involved with the students rather than the school teacher with a music therapist's consultant.

Gender differences were found in this study. Male students demonstrated significantly greater aggression scores as well as scores for the subscales of physical aggression and verbal aggression; however, no statistical differences were found in anger and hostility scores. The results identified with other studies' finding about differences of aggression level depending on gender, with male students being more aggressive (Crick & Grotpeter, 1995; Leff, Power, Manz, Costigan, & Nabors, 2001; Nansel et al., 2001; O'Donnell & Link, 2001). Just as covert forms of aggression such as anger and hostility did not have significant differences in the present study, more recent research concluded that the percentage of females' and males' covert forms of aggression level were similar (Juliano, Werner, & Cassidy, 2006; Waasdorp et al., 2010; Waasdorp & Bradshaw, 2009). Not many participants complained about the intervention, but a few complained because of gender differences. One particular participant complained that he did not want to follow the females' direction because the energy level was too low and different. Some female students sometimes complained about noise that came from male students' drum playing.

In summary, the findings of this study indicated that a therapeutic group drumming intervention was significantly associated with reducing aggression related to school violence, especially by enhancing peer relationships, which was reported quantitatively and qualitatively. The therapeutic group drumming also had effects on reducing physical aggression because the drumming involved physical input, such as

auditory and tactile feedback by vibration directly from the instruments or the air. This physical reaction prompted participants to identify their emotional status by listening to their sound and feeling the vibration directly on their bodies. As adolescents who had aggressive behaviors tend to be identified as perpetrators of school violence, they had difficulties expressing their emotion verbally. However, drumming could be a pathway for aggressive adolescents to express inner experiences, identify emotions, and manage their negative emotions. The use of therapeutic drumming created healthy group cohesion in a non-threatening way (Cammilleri, 2002). That also brought students' self-esteem, assertiveness, empathy, and it allowed them to focus on themselves and others, reducing students' stress and repressed feelings (Bittman et al., 2009; Camilleri, 2002).

The results of this study suggested that collaborative work between school music teachers and music therapists may be used effectively to mitigate aggression as related to school violence in middle school students in Korea. The strength of this intervention was that it was held in a realistic school context. A music teacher facilitated the intervention rather than a music therapist from outside of the school. It was hard to find experimental studies on musical approaches for school violence prevention. Therefore, the quantitative and qualitative results of the study may be informative and meaningful in this area. Most of the students reported that a drumming activity was fun and interesting in that the activities were not for the purpose of academic results. However, one student complained that he did not like the drumming class because the class did not directly relate to the academic goal of getting better results on tests.

Limitations and Suggestions

Several methodological restrictions need to be considered in this study. First, each group had only one teacher to lead. Therefore, each teacher's personal competency and relationship with the students might influence the results. One middle school and only the third year classes in the school were involved in the study. For future studies, interventions with more middle schools' students, larger samples, and varied ages could be undertaken.

The quantitative results were measured pre- and post- test so that only the short term effectiveness of the program was seen. In order to determine long term effectiveness of the therapeutic drumming, follow up assessment would be needed.

The qualitative results from interview and open-ended surveys were utilized just for the therapeutic drumming participants. It would be helpful to also analyze the qualitative data from the drumming group, and to compare its results with those of the therapeutic drumming group.

Some of the participants complained about noise because the whole class, more than 30 students, played drum at the same time. The noise might affect the results because it might disturb the participant physically and emotionally. Although the results showed positive effects from therapeutic drumming, smaller group size might have greater positive results with greater focus on individual students. Since one of the main purposes of this study was to identify therapeutic drumming as a possible mechanism for school violence prevention, outcome measures should be more directly concerned with measuring the effectiveness in terms of school violence prevention.

REFERENCES

- Aigen, K. (2008). In defense of beauty: A role for the aesthetic in music therapy theory. *Nordic Journal of Music Therapy, 17*(1), 3–18.
- Albornoz, Y. (2011). The effects of group improvisational music therapy on depression in adolescents and adults with substance abuse: A randomized controlled trial. *Nordic Journal of Music Therapy, 20*(3), 208–224.
- Baker, F., McRerran, K., Stott, D., & Wigram, T. (2009). Therapeutic songwriting in music therapy, Part II: Comparing the literature with practice across diverse clinical populations. *Nordic Journal of Music Therapy, 18*(1), 32–56.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Barnes, T. N., Smith, S. W., & Miller, M. D. (2014). School-based cognitive-behavioral interventions in the treatment of aggression in the United States: A meta-analysis. *Aggression and Violent Behavior, 19*(4), 311–321.
- Bensimon, M., Amir, D., & Wolf, Y. (2008). Drumming through trauma: Music therapy with post-traumatic soldiers. *The Arts in Psychotherapy, 35*(1), 34–48.
- Beardall, N. (2008). A program evaluation research study on the implementation of the mentors in violence prevention program in a public high school, Doctoral Dissertation, Lesley University.
- Bittman, B. B., Bruhn, K. T., Stevens, C., Westengard, J., & Umbach, P. O. (2003). Recreational music-making: A cost-effective group interdisciplinary strategy for reducing burnout and improving mood states in long-term care workers. *Advances in Mind–Body Medicine, 19*(3), 4–15.

- Bittman, B., Dickson, L., & Coddington, K. (2009). Creative musical expression as a catalyst for quality-of-life improvement in inner-city adolescents placed in a court referred residential treatment program. *Advances*, 24(1), 8–19.
- Blackett, P. S., & Payne, H. L. (2005). Health rhythms: A preliminary inquire into group-drumming as experienced by participants on a structured day services programme for substance-misusers. *Drugs: Education, Prevention, and Policy*, 12(6), 477–491.
- Bradt, J., Burns, D.S., & Creswell, J.W. (2013). Mixed methods research in music therapy research. *Journal of Music Therapy*, 50(2), 123–148.
- Bronfenbrenner, M. (1979). *The ecology of human development: experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Brown, E. C, Espelage, D. L., Low, S., & Polanin, J. R. (2013). The impact of a middle school program to reduce aggression, victimization, and sexual violence. *Journal of Adolescent Health*, 53(2), 180–186.
- Bruscia, K. E. (2014). *Defining Music Therapy* (3rd ed.]. Barcelona Publisher: Illinois.
- Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452–259.
- Camilleri, V. (2002). Community build Camilleri, V. (2002). Community building through drumming. *The Arts in Psychotherapy*, 29, 261–264
- Carter, B. A. (2011). A safe education for all: Recognizing and stemming harassment in music classes and ensembles. *Music Educators Journal*, 97(4), 29–32.
- Centers for Disease Control and Prevention, National Center for Injury Prevention and Control (2015). *Inquiry Prevention and Control*. Retrieved from

<http://www.cdc.gov/violenceprevention/youthviolence/index.html>

- Chang, H., Chou, M., Crawford, P., Hsu, M., Hsu, Y., & Lin, M. (2010). Pivotal moments and changes in the bonny method of guided imagery and music for patients with depression. *Journal of Clinical Nursing, 19*(7–8), 1139–1148.
- Chen, J., & Astor R. A. (2009). The perpetration of school violence in Taiwan: An analysis of gender, grade level and school type. *School Psychology International, 30*(6), 568–584.
- Chesney-Lind, M., Morash, M., & Irwin, K. (2007). Policing girlhood? Relational aggression and violence prevention. *Youth Violence and Juvenile Justice, 5*(3), 328–345.
- Choi, M. H. (2010). A pilot analysis of the psychological themes found during the CARING at Columbia – Music therapy program with refugee adolescents from North Korea. *Journal of Music Therapy, 47*(4), 380–407.
- Chong, H. J., & Kim, S. J. (2010). Education-oriented music therapy as an afterschool program for students with emotional and behavioral problems. *Arts in Psychotherapy, 37*(3), 190–196.
- Christner, R. W., Freidberg, R. D., & Sharp, L. (2006). Working with angry and aggressive youth. In R. B. Menutti, A. Freeman, & R. W. Christner (Eds.), *Cognitive-behavioral interventions in educational settings* (pp. 203–220). New York, NY: Guilford Press.
- Crick, N. R., Bigbee, M. A., & Howes, C. (1996). Gender differences in children's normative beliefs about aggression: How do I hurt thee? Let me count the ways. *Child Development, 67*(3), 1003–1014.

- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social psychological adjustment. *Child Development, 66*(3), 710–722.
- Cunningham, P. B., & Henggeler, S. W. (2001). Implementation of an empirically based drug and violence prevention and intervention program in public school settings. *Journal of Clinical Child Psychology, 30*(1), 221–232.
- Currie, M. (2012). Donging anger differently: Two controlled trials of percussion group psychotherapy for adolescent reactive aggression. *Journal of Adolescence, 35*(4), 843–853.
- Dodge, K. A. (2006). Translational science in action: Hostile attributional style and the developmental of aggressive behavior problems. *Development and Psychopathology, 18*(3), 791–814.
- Ellickson, P. L., & Bell, R. M. (1990). Drug prevention in junior high: A multi-site longitudinal test. *Science, 247*(16), 1299–1305.
- Ellickson, P. L., Bell, R. M., & Harrison, E. R. (1993). Changing adolescent propensities to use drugs: Results from Project ALERT. *Health Education Quarterly, 20*(2), 227–242.
- Elsaesser, C., Gorman-Smith, D., & Henry, D. (2013). The role of the school environment in relational aggression and victimization. *Journal of Youth Adolescence, 42*(2), 235–249.
- Esbensen, F., & Carson, D. (2009). Consequences of being bullied: Results from a longitudinal assessment of bullying victimization in a multi-site sample of American students. *Youth & Society, 41*(2), 209–233.

- Espelage, D. L., Low, S., Polanin, J. R., & Brown, E. C. (2013). The impact of a middle school program to reduce aggression, victimization, and sexual violence. *Journal of Adolescent Health, 53*(2), 180–186.
- Farmer, T.W., Farmer, M.A., Estell, D. B., & Hutchins, B. C. (2007). The developmental dynamics of aggression and the prevention of school violence. *Journal of Emotional and Behavioral Disorders, 15*(4), 194–208.
- Faulkner, S., Wood, L., Ivery, P. and Donovan, R. (2012). It's not just music and rhythm: evaluation of a drumming based intervention to improve the social wellbeing of alienated youth. *Children and Society, 37*(1), 31-39.
- Friedman, R. L. (2000). *The healing power of the drum*. Tempe, AZ: White Cliffs Media.
- Galen, B. R., & Underwood, M. K. (1997). A developmental investigation of social aggression among children. *Developmental Psychology, 33*, 589–600.
- Gardner, K. (1990). *Sounding the inner landscape: Music as medicine*. Stonington, MA: Caduceus Publications.
- Gold, C., Voracek, M., & Wigram, T. (2007). Predictors of change in music therapy with children and adolescents: The role of therapeutic techniques. *Psychology and Psychotherapy: Theory, Research and Practice, 80*(4), 577–589.
- Goldstein, S. E., Young, A. & Boyd, C. (2008). Relational aggression at school: Associations with school safety and social climate. *Journal of Youth Adolescence, 37*(6), 641–654.
- Gooding, L. F. (2011). The effect of a music therapy social skills training program on improving social competence in children and adolescents with social skills deficits. *Journal of Music Therapy, 48*(4), 440–462.

- Hammond, W. R., Whitaker, D. J., Jutzker, J. M., & Chin, P. M. (2006). Setting a violence prevention agenda at the centers for disease control and prevention. *Aggression and Violent Behavior, 11* (2), 112–119.
- Henggeler, S. W., & Schoenwald, S. K. (1998). *The MST supervisory manual: Promoting quality assurance at the clinical level*. Charleston, SC: MST Institute.
- Henggeler, S. W., Schoenwald, S. K., Borduin, C. M., Rowland, M. D., & Cunningham, P. B. (1998). *Multisystemic treatment of antisocial behavior in children and adolescents*. New York, NY: Guilford.
- Henggeler, S. W., & Borduin, C. M. (1990). Family therapy and beyond: *Multisystemic approach to treating the behavior problems of children and adolescents*. Pacific Grove, CA: Brooks/Cole.
- Henrich, C. C., Schwab-Stone, M., Fanti, K., Jones, S. M., & Ruchki, V. (2004). The association of community violence exposure with middle-school achievement: A prospective study. *Journal of Applied Developmental Psychology, 25*(3), 327–348.
- Hervey, L. & Kornblum, R. (2006). An evaluation of Kornblum's body-based violence prevention curriculum for children. *The Arts in Psychotherapy, 33*(2), 113–129.
- Hilton, N., Harris, G., Rice, M., Krans, T., & Lavigne, S. (1998). Antiviolence education in high schools. *Journal of Interpersonal Violence, 13*(6), 726–742.
- Ho, P., Tsao, J. C.I., Bloch, L., & Zeltzer, L. (2011). The impact of group drumming on social-emotional behavior in low-income children. *Evidence-Based Complementary and Alternative Medicine*. doi: 10.1093/ecam/neq072.
- Jensen, E. (2000). *Brain-based learning*. San Diego: Brain Store.

- Jones, L., Doces, M., Swearer, S., & Collier, A. (2013). *Kinder & Braver World Project: Research series. Implementing bullying prevention programs in schools: A how-to guide*. Cambridge, MA: Born.
- Juliano, M., Werner, R. S., & Cassidy, K. W. (2006). Early correlates of preschool aggressive behavior according to type of aggression and measurement. *Journal of Applied Developmental Psychology, 27*(5), 395-410.
- Juvonen, J. (2001). *School violence: Prevalence, fears, and prevention*. Rand Education Issue Paper. Retrieved from <http://www.rand.org/publications/IP/IP219>.
- Juvone, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology, 92*(2), 349-359.
- Kalani. (2005). *Together in rhythm: A facilitator's guide to drum circle music*. Los Angeles, CA: Alfred Publishing Company.
- Kaplan, C. (2000). The short term effects of small group hand drumming on mood, group cohesiveness and rhythm perception. *Dissertation Abstracts International, 60*(11), 5822B. (UMI No. 9949659).
- Kleinspehn-Ammerlahn, A., Riediger, M., Schmiedek, F., von Oertzen, T., Li, S., & Lindenberger, U. (2011). Dyadic drumming across the lifespan reveals a zone of proximal development in children. *Developmental Psychology, 47*(3), 632-644.
- Kokal, I., Engel, A., Kirschner, S., & Keysers, C. (2011). Synchronized drumming enhances activity in the caudate and facilitated prosocial commitment-if the rhythm comes easily. *Plos One, 6*(11), e27272. doi:10.1371/journal.pone.0027272

- Koshland, L., & Wittaker, J. W. B. (2004). PEACE through dance/movement: Evaluating a violence prevention program. *American Journal of Dance Therapy, 26*(2), 69–90.
- Laukka, P., & Gabrielsson, A. (2000). Emotional expression in drumming performance. *Psychology of Music and Music Education, 28*, 181–189.
- Lee, S. Y., & Oh, I. S. (2012). School violence in South Korea: An overview of school violence and intervention efforts. In S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (Eds.), *Handbook of school violence and school safety: International research and practice* (2nd ed., pp. 541–553). New York, NY: Routledge/Taylor & Francis Group.
- Leff, S. S., Kupersmidt, J. B., & Power, T. J. (2003). An initial examination of girls' cognitions of their relationally aggressive peers as a function of their own socialstanding. *Merrill-Palmer Quarterly, 49*, 28–54.
- Leff, S. S., Power, T. J., Manz, P. H., Costigan, R. E., & Nabors, L. A. (2001). School-based aggression prevention programs for young children: Current status and implications for violence prevention. *School Psychology Review, 30*, 343–360.
- Leff, S. S., Waasdorp, T. E., Paskewich, B., Gullan, R. L., Jawad, A. F., MacEvoy, J. P., Feinbegr, B. E., & Power, T. J. (2010). The preventing relational aggression in schools everyday program: A preliminary evaluation of acceptability and impact. *School Psychology Review, 39*(4), 569–587.
- Longhofer, J., & Floersch, J. (1993). African drumming and psychiatric rehabilitation. *Psychosocial Rehabilitation Journal, 16*(4), 3–10.

- Maschi, T., & Bradely, C. (2010). Recreational drumming: A creative arts intervention strategy for social work teaching and practice. *The Journal of Baccalaureate Social Work, 15*(1), 53–66.
- Mesquita, B. (2001). Emotions in collectivist and individualist cultures. *Journal of Personality and Social Psychology, 80*, 68–74.
- Mikenas, E. (2003). Drumming on the edge of leadership: Hand drumming and leadership skills for the New Millennium. *Percussive Notes, 41*(1), 42–45.
- Miller-Johnson, S., Costanzo, P. R., Coie, J. D., Rose, M. R., Browne, D. C., & Johnson, C. (2003). Peer social structure and risk-taking behaviors among African American early adolescents. *Journal of Youth and Adolescence, 32*, 375–384.
- Ministry of Education (2014). *School violence prevention*. Retrieved from <http://www.mest.go.kr/web/60880/ko/board/list.do?bbsId=292>
- Molina, I. A., Dulmus, C. N., & Sowers, K. M. (2005). Secondary prevention for youth violence: A review of selected school-based programs. *Brief Treatment and Crisis Intervention, 5*(1), 95–107.
- Moore, S., & Ryan, A. (2006). Learning to play the drum: An experiential exercise for management students. *Innovations in Education and Teaching International, 43*(4), 435–444.
- Mrazek, P. G., & Haggerty, R. J. (Eds.). (1994). *Reducing risks for mental disorders: Frontiers for preventive intervention research*. Washington, DC: National Academy Press.

- The Multisite Violence Prevention Project (2008). The multisite violence prevention project: Impact of a universal school-based violence prevention program on social-cognitive outcomes. *Society for Prevention Research*, 9(4), 231–244.
- Muschert, G. W., & Peguero, A. A. (2010). The Columbine effect and school anti violence policy. *Research in Social Problems & Public Policy*, 17, 117–148.
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ran, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth. *Journal of the American Medical Association*, 285, 2094–2110.
- Newman, D. A., Horne, A. M., & Bartolomucci, C. L. 2000. *Bully Busters: A Teacher's Manual for Helping Bullies, Victims, and Bystanders*. Champaign, IL: Research Press.
- Nixon, C. L., & Werner, N. E. (2010). Reducing adolescents' involvement with relational aggression: Evaluating the effectiveness of the creating a safe school (CASS) intervention. *Psychology in the Schools*, 47(6), 606–620.
- Nöcher-Ribaupierre, M., & Wölfl, A. (2010). Music to counter violence: A preventative approach for working with adolescents in schools. *Nordic Journal of Music Therapy*, 19(2), 151–161.
- Olweus, E. (1987). Bully/victim problems among school-children in Scandinavia. In J. P. Myklebust & R. Ommundsen (Eds.), *Psykologprofesjonen mot ar 2000* (pp. 395–413). Oslo, Norway: Universitetsforlaget.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Cambridge, MA: Blackwell.

- Owens, L., Shute, R., & Slee, P. (2000). "Guess what I just heard!". Indirect aggression among teenage girls in Australia. *Aggressive Behavior, 26*(1), 67–83.
- Paquette, J. A., & Underwood, M. K. (1999). Gender differences in young adolescents' experiences of peer victimization: Social and physical aggression. *Merrill-Palmer Quarterly, 45*(2), 242 – 265.
- Park, Y. J., Ryu, H., Han, K. S., Kwon, J. H., Kim, H. K., Kang, H. C., Yoon, J. W., Cheon, S. H., & Shin, H. (2010). Anger, anger expression, and suicidal ideation in Korean Adolescents. *Archives of Psychiatric Nursing, 24*(3), 168 – 177.
- PK-AQuette, J. A., & Underwood, M. K. (1999). Young adolescents' experiences of peer victimization: Gender differences in accounts of social and physical aggression. *Merrill-Palmer Quarterly, 45*(2), 233–258.
- Peguero, A. A. (2011). Violence, schools, and dropping out: Racial and ethnic disparities in the educational consequence of student victimization. *Journal of Interpersonal Violence, 26*(8), 3753–3772.
- Peguero, A. A., & Popp, A. M. (2011). Youth violence at school and the intersection of gender, race, and ethnicity. *Journal of Criminal Justice, 40*(1), 1–9.
- Porter, S., Holmes, V., McLaughlin, K., Lynn, F., Cardwell, C., Braiden, H., Doran, J., & Rogan, S. (2012). Music in mind, a randomized controlled trial of music therapy for young people with behavioral and emotional problems: Study protocol. *Journal of Advanced Nursing, 68*(10), 2349–2358.
- Priestley, M. (1994). *Essays on analytical music therapy*. Gilsum, NH: Barcelona Publishers.

- Rodocy, R. E., & Boyle, J. D. (1997). *Psychological foundations of musical behavior*. (3rd ed.). Springfield, IL: Charles C. Thomas.
- Roseman, I. J., Dhawan, N., Rettek, I. S., Naidu, R. K., & Thapa, K. (1995). Cultural differences and cross-cultural similarities in appraisals and emotional response. *Journal of Cross-Cultural Psychology, 26*, 23-48.
- Savin-Williams, R. C., & Berndt, T. J. (1990). Friendship and peer relationships. In S. S. Feldman & G. R. Elliott (Eds.), *At the threshold; The developing adolescent* (pp. 277–307). Cambridge, MA: Harvard University Press.
- Shafer, K. S., & Silverman, M. J. (2013). Applying a social learning theoretical framework to music therapy as a prevention and intervention for bullies and victims of bullying. *The Arts in Psychotherapy, 40*(5), 149–500.
- Sharma, M., & Jagdev, T. (2012). Use of music therapy for enhancing self-esteem among academically stressed adolescents. *Pakistan Journal of Psychological Research, 27*(1), 53–64.
- Shechtman, Z. (2006). The relation of life skills and perceived classroom climate to aggression. *International Journal for the Advancement of Counseling, 28*(4), 359–373.
- Shechtman, Z., & Ifargan, M. (2009). School-based integrated and segregated interventions to reduce aggression. *Aggressive Behavior, 35*(4), 342–356.
- Scheithauer, H., Hayer, T., Petermann, F., & Jugert, G. (2006). Physical, verbal, and relational forms of bullying among German students: Age trends, gender differences, and correlates. *Aggressive Behavior, 32*(3), 261–275.

- Seung, Y. H. (2013). A study of music program development for reducing and preventing school violence. *Journal of Learner-Centered Curriculum and Instruction*, 13(5), 565–586.
- Shafer, K. S., & Silverman, M. J. (2013). Applying a social learning theoretical framework to music therapy as a prevention and intervention for bullies and victims of bullying. *The Arts in Psychotherapy*, 40(5), 495–500.
- Sharma, M., & Jagdev, T. (2012). Use of music therapy for enhancing self-esteem among academically stressed adolescents. *Pakistan Journal of Psychological Research*, 27(1), 53–64.
- Sheehan, K., Kim, L., & Galvin, M. S. (2004). Urban children's perceptions of violence. *Archives of Pediatric and Adolescent Medicine*, 158(1), 74–77.
- Slotoroff, C. (1994). Drumming technique for assertiveness and anger management in the short-term psychiatric setting for adult and adolescent survivors of trauma. *Music Therapy Perspectives*, 12(2), 111–116.
- Smith, P. K. (2011). Why interventions to reduce bullying and violence in schools may (or may not) succeed: Comments on this special section. *International Journal of Behavioral Development*, 35(5), 419–423.
- Smith, P. K., Mahdavi, J., Carvalho, M., Fischer, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, 49(4), 376–385.
- Snow, S., & D'Amico, M. (2010). The drum circle project: A qualitative study with at-risk youth in a school setting. *Canadian Journal of Music Therapy*, 16(1), 12-39.

- Spiel, C., & Strohmeier, D. (2011). National strategy for violence prevention in the Austrian public school system: Development and implementation. *International Journal of Behavioral Development, 35*(5), 412–418.
- Steven, C. K., & Burt, J. W. (1997). Drum Circles: Theory and application in the mental health treatment continuum. *Continuum, 4*(2), 175–184.
- Stone, N. N. (2005). Hand-drumming to build community. The story of the Whitter Drum Project. *New Directions for Youth Development, 106*(6), 73–83.
- Streeck-Fischer, A., & van der Kolk B.A. (2000). Down will come baby, cradle and all: Diagnostic and therapeutic implications of chronic trauma on child development. *Australian and New Zealand Journal of Psychiatry, 34*(6), 903–918.
- Stueve, A., O'Donnell, L., & Link, B. (2001). Gender differences in risk factors for violent behavior among economically disadvantaged African American and Hispanic young adolescents. *International Journal of Law and Psychiatry, 24*(4-5), 539–557.
- Suh, E. S. (in press). *The use of group drumming with Korean high school students in school violence prevention program: A pilot study*. Unpublished manuscript.
- Suh, S. G., & Kwon, S. M. (2002). Development and preliminary validation of a Korean version of the Aggression Questionnaire. *Journal of Korean Psychology Association, 21*(2), 487–501.
- Tashakkori, A., & Creswell, J. (2008). Mixed methodology across disciplines. *Journal of Mixed Methods Research, 2*(1), 1–5.
- Tesch, R. (1990). *Qualitative research: Analysis types and software tools*. New York: Falmer.

- Tolan, P. H., & Gorman-Smith, D. (2002). What violence prevention research can tell us about developmental psychopathology. *Development and Psychopathology, 14*(4), 713–729.
- Robbins, J. E. (2000). Violence prevention in the schools: Implications for occupational therapy. *Boston University Student Paper Work, 17*(1), 75–82.
- Vaughn, B. E., Vollenweider, B., Bost, K. K., Aziria-Evans, M. R., & Snider, J. (2003). Negative interactions and social competence for preschool children in two samples: Reconsidering the interpretation of aggressive behavior for young children. *Merrill-Palmer Quarterly, 49*(3), 245–278.
- Ventre, M., & McKinney, C. H. (2015). The Bonny method of guided imagery and music. In B. L. Wheeler (Ed), *Music therapy handbook* (pp. 186-205). New York, NY: Guilford Press.
- Waasdorp, T. E., Bagdi, A., & Bradshaw, C. P. (2010). Peer victimization among urban predominantly African American youth: Coping with relational aggression between friends. *Journal of School Violence, 9*(1), 98–116.
- Waasdorp, T. E., & Bradshaw, C. P. (2009). Child and parent perception of relational aggression within urban predominantly African American children's friendships: Examining patterns of concordance. *Journal of Child and Family Studies, 18*(6), 731–745.
- Walker, H., Severson, H., Feil, E., Stiller, B., & Golly, A. (1998). First step to success: Intervening at the point of school entry to prevent antisocial behavior patterns. *Psychology in the Schools, 35*(3), 259–268.

- Watson, D. M. (2002). Drumming and improvisation with adult male sexual offenders. *Music Therapy Perspectives, 20*(2), 105–111.
- Werner, N. E., & Hill, L. H. (2010). Individual and peer group normative beliefs about relational aggression. *Child Development, 81*(3), 826–836.
- Whitfield, G. W. (1999). Validation school social work: An evaluation of a cognitive behavioral approach to reduce school violence. *Research on Social Work Practice, 9*(4), 399–426.
- Wigram, T. (2004). *Improvisation: Methods and techniques for music therapy clinicians, educators, and students*. London, UK: J. Kingsley Publishers.
- Wood, L., Ivery, P., Donovan, R., & Lambin, E. (2013). “To the beat of a different drum”: Improving the social and mental wellbeing of at-risk young people through drumming. *Journal of Public Mental Health, 12*(2), 70–79.
- Wyatt, J. (2000). Drumming for violence prevention: The effects of group music therapy on self-esteem and peer relationships in high school students. Detroit, MI: Michigan State University.
- Zivin, G., Hassan, N. R., DePaula, G. F., Monti, D. A., Harlan, C., Hossain, K. D., & Patterson, K. (2001). An effective approach to violence prevention: Traditional martial arts in middle school. *Adolescence, 36*(143), 443–459.

APPENDIX A

Informed Consent Form:

The Use of Music Intervention with Korean Middle School Students in School Violence Prevention Programs

Principal Investigator: Eun Sil Suh, Ph.D student in Expressive Therapies, Lesley University, Invited Professor in Music Therapy department, Ewha Women's University

Co-researcher: Michele Forinash, Director in Expressive Therapies, Lesley University

Your child is being asked to volunteer in this study to assist in my doctoral research on the Use of Music Intervention with Korean Middle School Students in School Violence Prevention Programs.

The intent of the sequential mixed methods study is to study the effects of a group drumming intervention in a school violence prevention program.

- a. Your child will be given a survey to fill out on their background and personal information.
- b. Your child will be given questionnaires to fill out about their aggression.
- c. The school music teacher will provide group drumming intervention with the experimental group on 10 to 12 consecutive times for 45 minutes.
- d. Your child might be interviewed individually after music intervention is terminated. The interview will be audio taped.

The research project is anticipated to be finished by approximately October, 2014.

I, _____, consent to allow my child to participate in a study of the Use of Music Intervention with Korean Middle School Students in School Violence Prevention Programs. I understand that:

- My child is volunteering for a school violence prevention program involving music intervention, approximately 45 minutes in length.
- The sessions will include verbal discussion about the child's personal experiences.
- My child will answer the survey and questionnaires before and after the whole program.
- My child might be interviewed individually by the investigator after the group is terminated.
- Sessions will be videotaped and an interview will be audio taped.
- I and my child's identity will be protected.
- Session materials, including video or audiotapes will be kept confidential and used anonymously only, for purposes of supervision, presentation and/or publication.

- The session may bring up feelings, thoughts, memories, and physical sensations. Therefore, possible emotional reactions are to be expected; however, the child is free to end the session at any time. If the child finds that he has severe distress, he will be provided with resources and referrals to assist him, and will not lose any benefits that I might otherwise gain by staying in the study.
- This study will not necessarily provide any benefits to my child. However, he may experience increased self-knowledge and other personal insights that he may be able to use in daily life. The results of the study may also help to increase public and professional awareness of the Music Intervention with Korean Middle School Students in School Violence Prevention Programs
- The video and audio recordings and transcripts will be kept in a locked file cabinet in the investigator's possession for possible future use. However, this information will not be used in any future study without written consent.
- The therapist is ethically bound to report, to the appropriate party, any criminal intent or potential harm to self.
- I may choose to withdraw my child from the study at any time with no negative consequences.

Confidentiality, Privacy and Anonymity:

*You have the right to remain anonymous. If you elect to remain anonymous, we will keep your records private and confidential **to the extent allowed by law**. We will use pseudonym identifiers rather than your name on study records. Your name and other facts that might identify you will not appear when we present this study or publish its results.*

If for some reason you do not wish to remain anonymous, you may specifically authorize the use of material that would identify you as a subject in the experiment. You can contact my advisor Dr. Michele Forinash at 617.349.8166 or forinasm@lesley.edu with any additional questions. You may also contact the Lesley University Human Subjects Committee Co-Chairs (see below)

You will be given a copy of this consent form to keep.

a) Investigator's Signature:

Date

Investigator's Signature

Print Name

b) Subject's Parents or primary caregiver's Signature:

I am 18 years of age or older. The nature and purpose of this research have been satisfactorily explained to me and I agree my child to become a participant in the study as described above. I understand that my child is free to discontinue participation at any time if I so choose, and that the investigator will gladly answer any questions that arise during the course of the research.

Date	Parents' or Primary caregiver's Signature	Print Name

c) Subjects' assent

I am under 18 years of age. I assent to become a participant in the study as described above.

Date	Subject's Signature	Print Name

There is a Standing Committee for Human Subjects in Research at Lesley University to which complaints or problems concerning any research project may, and should, be reported if they arise. Contact the Committee Co-Chairs Drs. Terry Keeney or Robyn Cruz (rcruz@lesley.edu) at Lesley University, 29 Everett Street, Cambridge Massachusetts, 02138.

APPENDIX B

Informed Consent Form (Korean Version):

연구 참여 동의서

그룹 타악기 활동이 한국 중학생의 학교 폭력 예방에 미치는 효과

The Use of Group Drumming with Korean Middle School Students
in School Violence Prevention Programs

주연구자: 서은실 (미국공인 음악치료사), 미국 레슬리대학 표현예술치료 Doctoral Candidate,
이화여자대학교 음악치료학과 초빙교수

지도교수: Dr. Michele Forinash, Lesley 대학교 표현예술치료학과, 교수

본 연구의 목적은 그룹 드럼 활동이 한국 고등학생의 폭력 예방 프로그램에 미치는 효과에 대해
알아보고자 하는 것입니다. 당신은 다음과 같은 사항들을 경험하게 될 것입니다.

1. 연구 종료 후 학교 폭력 예방 프로그램에 관한 질문들에 대답을 하게 될 것입니다.
2. 본 연구에 대해 궁금하신 점들은 언제나 문의가 가능합니다.

(서은실 010-2833-6274, ensil7@hanmail.net)

나, _____ 는 그룹 드럼 활동을 통한 학교 폭력 예방 프로그램 연구에 참여함을
동의합니다.

나는 다음의 내용일 이해하고 있습니다.

- 학생은 설문지와 학교폭력에 관한 질문지에 대답을 할 것입니다.
- 학생은 활동 종결 후 개인적으로 인터뷰를 할 수도 있습니다.
- 학생의 모든 개인정보는 보호됩니다.
- 프로그램 참여 관련 오디오 및 비디오 관련 촬영이 있을 시 자료는 비밀이 보장되며,
슈퍼비전, 발표, 출판 등의 목적으로 사용 되어질 시 익명이 보장됩니다. .
- 본 연구가 나에게 특정한 이익을 주지 않을 수도 있습니다. 그러나 이를 통하여 학교
폭력에 관한 인식 개선 및 분노, 불안, 스트레스 감소가 될 수 있습니다. 또한 이 연구의
결과는 그룹 드럼 활동을 통한 학교 폭력 예방 프로그램에 대한 전문가들의 인식을
증가시키는데 기여할 수 있습니다.
- 연구자(서은실)는, 범죄나 해를 끼치려는 의도가 보일 때 관련 기관에 보고 해야 하는
윤리적 의무를 동반합니다.
- 학생은 언제나 연구 참여를 철회할 수 있으며 이로 인한 어떠한 불이익도 동반되지
않습니다.

비밀보장, 개인정보, 익명성:

여러분은 익명성에 관한 권리를 가지고 있습니다. 익명으로 남기를 원하신다면, 여러분의 개인정보와 비밀은 외부의 법에 의해 보호됩니다. 연구자는 당신의 이름을 사용하는 대신 가명을 사용할 것이며 연구 결과 발표나 출판에서 이름이 확인될 수 있는 정보는 사용하지 않을 것입니다.혹 익명처리를 원하지 않으신다면, 연구대상자로 정보공개에 대한 동의서를 따로 작성해주셔야 합니다. 그 외에 궁금한 점이 있으시면 연구자의 지도교수인 Dr. Michele Forinash 에게 연락하시면 됩니다. (전화 1.617.349.8166, 이메일 forinasm@lesley.edu). 또한 레슬리 대학교 산하 인간을 대상으로 하는 연구를 검토하는 위원회 (Lesley University Human Subjects Committee Co-Chairs)로 연락하셔도 됩니다. (아래참조)

a) 연구자 서명:

날짜 연구자서명 이름

b) 참여자 보호자 서명

나는 19 세 이상입니다. 본 연구 목적이 충분히 설명되었으며, 위에 설명된 대로 연구에 참여하는 것에 동의합니다. 나는 언제든지 연구 참여를 중단할 수 있음을 이해하고 있으며 연구자는 연구과정 동안 어떠한 질문에든 기꺼이 응답할 것임을 이해합니다.

날짜 서명 이름

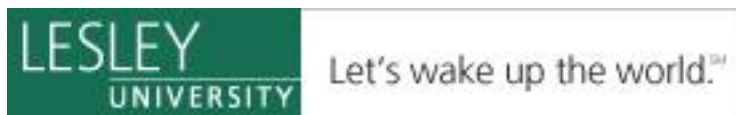
c) 참여자 서명

나는 18 세 이하입니다. 위에 설명된 대로 연구에 참여하는 것에 동의합니다.

날짜 서명 이름

레슬리 대학교에는 연구에 관한 불만을 보고 할 수 있는 사람을 대상으로 하는 연구를 검토하는 위원회 (Standing Committee for Human Subjects)가 있습니다. 공동위원장 Drs. Terry Keeney or Robyn Cruz(rcruz@lesley.edu), Lesley University, 29 Everett Street, Cambridge Massachusetts, 02138 로 연락하시면 됩니다.

APPENDIX C



29 Everett Street
Cambridge, MA 02138
Tel 617-349-8234
Fax 617-349-8190
irb@lesley.edu

Institutional Review Board

To: **Eun Sil Suh**

From: Robyn Cruz and Terrence Keeney, Co-chairs, Lesley IRB

RE: Application for Expedition of Review: *The Use of Music Intervention with Korean Middle School Students in School Violence Prevention Programs*

IRB Number: 13-053

This memo is written on behalf of the Lesley University IRB to inform you that your application for approval by the IRB through expedited review has been granted. Your project poses no more than minimal risk to participants.

If at any point you decide to amend your project, e.g., modification in design or in the selection of subjects, you will need to file an amendment with the IRB and suspend further data collection until approval is renewed.

If you experience any unexpected “adverse events” during your project you must inform the IRB as soon as possible, and suspend the project until the matter is resolved.

An expedited review procedure consists of a review of research involving human subjects by an IRB co-chairperson and by one or more experienced reviewers designated by the chairperson from among members of the IRB in accordance with the requirements set forth in 45 CFR 46.110.
Source: 63 FR 60364-60367, November 9, 1998.

Date of IRB Approval: May 7th, 2014

APPENDIX D

Therapeutic Drumming Group Program

Session	Activities	Instruments
Session	Goal: To improve self-expression	
1 ~ 2	<p style="text-align: center;">< Drumming improvisation ></p> <p>① Each student was asked to select and play the instruments.</p> <p>② The group improvised the rhythm and sound, which was adapted to the drum circle technique.</p> <p>③ The teacher gave hand directions to make the sound softer or louder, to stop, to play the drum with a beat, or to rumble.</p> <p>④ The group was asked to improvise drumming, expressing their emotions and stress without facilitation by the teacher.</p>	<p>-Djembes, -Hand drums, -Sound shape drums, -Paddle drums, -Cowbells, -Agogobells, -Wood blocks</p>
	<p style="text-align: center;"><Resonate bell playing ></p> <p>① The students were asked to play the resonator bells.</p> <p>② The group was divided into four groups and each group had a different chord (C, Am, Dm, and G chord groups).</p> <p>③ Following the teachers' keyboard accompaniment of chord progressions, each group took a turn to play the resonator bell in order (C-Am-Dm-G).</p> <p>④ Then the students were asked to play the resonator bells freely, expressing their emotion that day.</p> <p>⑤ The group was then asked how they feel when each one played to make harmony or improvised freely.</p>	<p>-Resonate bells, -Keyboard</p>
Session	Goal: To improve anger management	
3 ~ 7	<p style="text-align: center;"><Dyad playing with secure distance ></p> <p>① The students were divided into dyads, so each student had a partner.</p> <p>② One of the students held drumsticks while the other student held the drum.</p> <p>③ A student walked towards his or her partner until the partner</p>	<p>-Sound shape drums -Mallets</p>

<p>said “stop.”</p> <ol style="list-style-type: none"> ④ A student who had a drumstick stands some distance away from his or her partner and then walked to the partner until the partner says, “stop.” ⑤ The students who had drumsticks play their drums until their partners said “stop.” ⑥ Partner then exchanged roles. ⑦ The group was asked how they feel when each one was a leader and a responder. 	
<p>Goal: To control aggressive behavior and increase assertiveness skills:</p>	
<p><Being a conductor of the drumming group></p> <ol style="list-style-type: none"> ① The students were asked to play the percussive drums. ② The group improvised the rhythm and sound, which was adapted to the drum circle technique. ③ The teacher gave hand directions to make the sound softer or louder, to stop, to play the drum with a beat, or to rumble (i.e., to play without a beat). ④ The teacher selected one student to be a leader and asked him or her to stop the group using hand signals, then selected a few more students to take turns being the leader. ⑧ The group was asked how they feel when each one was a leader and a responder. 	<p>-Djembes, -Hand drums, -Sound shape drums, -Paddle drums, -Cowbells, -Agogobells, -Wood blocks</p>
<p>Goal: To improve empathy</p>	
<p><Call and response></p> <ol style="list-style-type: none"> ① One student was selected as leader and asked to play his or her improvised rhythm, which the rest of the group members echoed back (a call and response type activity). ② The leader then played two beats at first, and then extended to play sets of four beats and the leader could change the volume. ③ The leader who was selected by the teacher then improvised without a structured beat, and the rest of the group played their drums with matching beat and reflected the leader’s expression. ⑨ The group was asked how they feel when each one was a leader and a responder. 	<p>-Djembes, -Hand drums, -Sound shape drums, -Paddle drums, -Cowbells, -Agogobells, -Wood blocks</p>

	<p><Dyads drumming playing></p> <ol style="list-style-type: none"> ① The students were divided into dyads. ② One partner expressed the physical tension of their hands and arms, and the other partner played the drum, reflecting the tension by controlling the volume and tempo. ③ Partners then exchanged roles. ④ The group was asked how they felt when each one was a leader and a responder. 	<p>-Djembes, -Hand drums, -Sound shape drums, -Paddle drums</p>
Session	Goal: To increase awareness of others and team building	
8 ~ 10	<p><Boom whackers group playing></p> <ol style="list-style-type: none"> ① The group was asked to play boom whackers and each student had two notes. ② The group was divided into three sub-groups, each with a different chord. ③ The sub-groups played different parts of a 12-measure blues piece. ④ While playing the boom whackers, the group was asked to express their stress and anger. ⑤ Then the group was asked to play while trying to listen to others' playing. ⑥ The group was asked how they felt when they play expressing their stress and anger, and when listening to others playing. 	<p>-Boom whackers</p>
	<p><Nanta: adapted from Korean traditional group drumming></p> <ol style="list-style-type: none"> ① The group played Nanta group drumming using buk and other stick drums. ② The group was asked to play a certain beat together, following the written notes. ③ The group was given simplified sheet music, which used white and black circles and square shapes of different sizes. ④ The notes represented whether the center or edge of the drum was played (squares = playing the edge of the drum), as well as the volume of the drum (black circles = loud; white circles = soft; differences in the size of the symbols signify greater or lower volume). 	<p>-Buk(Korean traditional drum with a mallet), -Nanta drum (Korean fusion traditional drum with two mallets)</p>

	<ul style="list-style-type: none">⑤ The activity was a modified version of the Nanta that could be read more easily by beginners.⑥ The group was asked how they felt when they play the drum simultaneously.	
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APPENDIX E
Aggression Questionnaire (Korean Version): K-AQ

_____학년 _____반, _____번

성별: 남, 여

이 질문지는 여러분이 일상생활에서 경험할 수 있는 내용들로 구성되어 있습니다. 각 문항들을 자세히 읽어 보시고, **평소의 자신을 얼마나 잘 나타내는지** 그 정도를 표시해 주시기 바랍니다. 각 문항별로 평소의 자신을 잘 나타낸다고 생각되는 정도를 아래 척도상의 적당한 숫자에 0 표를 하여 주십시오.

번호	문항	전혀 그렇지 않다	약간 그렇다	웬만큼 그렇다	꽤 그렇다	매우 많이 그렇다
1	때로 나는 누군가를 치고 싶은 충동을 통제하기 어렵다.	1	2	3	4	5
2	나는 친구와 의견이 다를 때 솔직하게 얘기한다.	1	2	3	4	5
3	나는 화가 빨리 치밀지만 또 빨리 풀어진다.	1	2	3	4	5
4	나는 때로 시기나 질투에 차 있다.	1	2	3	4	5
5	누군가 화를 한껏 돋우면, 나는 그 사람을 칠지도 모른다.	1	2	3	4	5
6	나는 다른 사람과 의견 충돌이 잦다.	1	2	3	4	5
7	일이 뜻대로 안 되었을 때 나는 화를 참기 어렵다.	1	2	3	4	5
8	내가 부당하게 대우받고 있다고 느낄 때가 때때로 있다.	1	2	3	4	5
9	누군가 나를 때리면, 나도 되받아 친다.	1	2	3	4	5
10	사람들이 나를 짜증나게 하면, 나도 그에 맞서 그들에게 한마디 해 줄 수 있다.	1	2	3	4	5
11	나는 때로 울분이 치밀어 참기어려워 금방이라도 폭발해 버릴 것 같다.	1	2	3	4	5
12	다른 사람들은 항상 운이 좋아 보인다.	1	2	3	4	5
13	나는 보통 사람들보다 좀 더 많이 치고 받고 싸우는 편이다.	1	2	3	4	5
14	나는 다른 사람과 의견이 다를 때, 흔히 논쟁을 벌이게 된다.	1	2	3	4	5

15	나는 쉽게 흥분하지 않는 사람이다.	1	2	3	4	5
16	나는 때로는 스스로도 놀랄 정도로 심한 적대감에 휩싸이곤 한다.	1	2	3	4	5
17	나의 권리를 보호하기 위해서 폭력을 행사해야 한다면, 나는 기꺼이 그렇게 하겠다.	1	2	3	4	5
18	친구들은 내가 따지기를 좋아한다고 말한다.	1	2	3	4	5
19	누가 내게 지나치게 친절하면, 나는 그 사람이 내게 원하는 게 있어 그러지 않나 생각한다.	1	2	3	4	5
20	나는 소위 '내 친구' 라는 자들이 나에 대해 몰래 이야기 하고 다닌다는 것을 알고 있다.	1	2	3	4	5
21	나를 몰아세운 사람과 주먹다짐을 한 적이 있다.	1	2	3	4	5
22	나는 너무 화가 나서 물건을 부순 적이 있다.	1	2	3	4	5
23	나는 지나치게 친한 척하는 낯선 사람을 보면 의심이 든다.	1	2	3	4	5
24	나는 누군 때리는 것은 어떤 이유로도 정당화 될 수 없다고 생각한다.	1	2	3	4	5
25	나는 화나는 것을 통제하는 데 어려움을 겪는다.	1	2	3	4	5
26	나는 때로 사람들이 내가 모르게 나를 비웃고 있다는 느낌이 든다.	1	2	3	4	5
27	나는 내가 아는 사람을 위협해 본 적이 있다.	1	2	3	4	5