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Improving the therapeutic alliance with adolescents using music

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While the importance of the therapeutic alliance in therapy is well established, and the impact that music has upon people has been demonstrated in the literature, there have not been any studies that examined the direct effect of having music playing in session upon the therapeutic alliance. This study utilized an ABAB reversal design with a single male adolescent subject in a residential setting to assess the impact of music upon the therapeutic alliance. The independent variable was the addition of music to treatment as usual during target sessions, while the dependent variable was the therapeutic alliance which was measured using the Working Alliance Inventory, Short Form (WAI-S; Tracey & Kokotovic, 1989) every session. The data suggested that music does in fact improve the therapeutic alliance, as the subject repeatedly rated the quality of the therapeutic alliance higher during those sessions when music was played. Future studies could continue to examine the relationship between music and the therapeutic alliance with other populations and by utilizing other methodological designs.

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IMPROVING THE THERAPEUTIC ALLIANCE WITH ADOLESCENTS USING MUSIC

A DISSERTATION

SUBMITTED TO THE FACULTY OF

SCHOOL OF PROFESSIONAL PSYCHOLOGY

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While the importance of the therapeutic alliance in therapy is well established, and the impact that music has upon people has been demonstrated in the literature, there have not been any studies that examined the direct effect of having music playing in session upon the therapeutic alliance. This study utilized an ABAB reversal design with a single male adolescent subject in a residential setting to assess the impact of music upon the therapeutic alliance. The independent variable was the addition of music to treatment as usual during target sessions, while the dependent variable was the therapeutic alliance which was measured using the Working Alliance Inventory, Short Form (WAI-S; Tracey & Kokotovic, 1989) every session. The data suggested that music does in fact improve the therapeutic alliance, as the subject repeatedly rated the quality of the therapeutic alliance higher during those sessions when music was played. Future studies could continue to examine the relationship between music and the therapeutic alliance with other populations and by utilizing other methodological designs.

Keywords: therapeutic alliance, music, single subject, reversal design, Working Alliance Inventory
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**Background**

**Therapeutic Alliance**

Therapeutic alliance is a general term that includes various client and therapist interactions and relational processes that occur in conjunction with, but theoretically separate from, orientation and specific interventions in the change process (Green, 2006). Many factors play into the construct of therapeutic alliance, including but not limited to: the client’s experience of the therapist’s empathy and regard, agreement and acceptance of the task of therapy, trust and confidence in the therapist, and client-therapist personality match (Elvins & Green, 2008; Green, 2006; Tabor, Leibert, & Agaskar, 2011). The term “therapeutic alliance” is often used interchangeably in the literature and in practice with the terms “working alliance”, “therapeutic bond”, and “helping alliance” (Martin, Garske, & Davis, 2000). For the sake of consistency, this study will use the term “therapeutic alliance” exclusively.

The field of psychology first started to examine the *relationship* between client and psychologist when Sigmund Freud introduced the concepts of transference and counter-transference (Freud, 1912). This understanding of the relationship as its own entity, unique and separate from specific intervention strategies, was one that Carl Rogers brought to the forefront of psychology in the 1960’s with the advent of Humanistic Psychology (Rogers, 1965). At that time, the idea of the client’s experience of the clinician’s empathy, unconditional positive regard, and rapport was first summarized as “therapeutic bond” by Anderson and Anderson (1962).

Arguably the most seminal figure in the area of therapeutic alliance, Bordin wrote in 1979 that “the working alliance between the person who seeks change and the one who offers to be a change agent is one of the keys, if not the key, to the change process” (p. 252). Bordin was the first to posit that the therapeutic alliance relates directly to the outcome of therapy and that
the therapeutic alliance is common and vital to all methods of therapy. His conceptualization of the therapeutic alliance was comprised of three components: agreement on goals, collaboration on tasks (empathy, understanding, acceptance, etc.), and the bond (the interpersonal relation and union) between the therapist and client. This three-pronged understanding of therapeutic alliance formed the basis of the Working Alliance Inventory (WAI; Hovarth & Greenberg, 1986), which is a self-report measure that includes 36 likert-type questions that provides a total score reflective of the therapeutic alliance, and has been cited in various articles that describe therapeutic alliance (Crits-Christoph, Gibbons, & Hearon, 2006; Elvins & Green, 2008; Kondrat & Early, 2010; Martin et al., 2000; Tichenor & Hill, 1989).

Bordin’s hypothesis regarding the importance of the therapeutic alliance has since been supported, as the therapeutic alliance has been found to account for more variance as a single variable in treatment outcome than other factors such as therapist adherence to manuals and therapist competence (Fluckiger, Del Re, Wampold, Symonds, & Horvath, 2012; Webb, DeRubeis, & Barber, 2010). Horvath and Symonds (1991) performed a meta-analysis on 24 studies looking at the quality of the therapeutic alliance as related to outcome measures. The authors found an average effect size of $r=.26$ which they called a “relatively robust variable linking the therapy process to outcome” (p. 146). While the authors found various factors that related to successful treatment outcomes, they wrote that the most predictive was the client’s experience of the therapeutic alliance. Martin et al. (2000) performed a meta-analysis using the same inclusionary criteria as Horvath and Symonds (1991) and found 79 studies to compare. Martin et al. reported a weighted effect size of $r=.22$ for the correlation of therapeutic alliance and therapeutic outcome, which is commensurate with the original findings of Horvath and Symonds.
Krupnick et al. (1996) conducted a study for the National Institute of Mental Health examining the therapeutic alliance in both therapy and pharmacotherapy. The authors compared the effect of therapeutic alliance across Cognitive Behavioral Therapy (CBT), interpersonal therapy, clinical management, placebo, and pharmacotherapy. They examined the therapeutic alliance for all 225 subjects in the different protocols and found that there were no differences in the quality of the therapeutic alliance across therapeutic modalities and that the therapeutic alliance was moderately correlated with outcome, $r^2 = .46$. Krupnick et al. concluded that the therapeutic alliance accounted for a greater portion of the variance in outcomes than treatment method, even when compared to pharmacotherapy. The therapeutic alliance has been found to have the greatest influence on outcome regardless of orientation or specific intervention used (Florsheim, Shotorbani, Guest-Warnick, Barratt, & Hwang, 2000; Fluckiger et al., 2012; Krupnick et al., 1996). This supports the idea that the “overall relation of the therapeutic alliance with outcome is moderate, but consistent, regardless of many variables that have been posited to influence this relationship” (Martin et al., 2000, p. 438). These findings, combined with the moderate correlation to treatment outcome found by multiple meta-analyses is evidence that the therapeutic alliance “occupies such an important place in our conceptualization of what good therapy entails that not paying attention to its quality during practice or supervision could be viewed as unethical” (Castonguay, Constantino, & Holtforth, 2006, p. 271).

**Therapeutic Alliance with Adolescents**

Research suggests that forming a strong therapeutic alliance with adolescents is more difficult than with adults, and even more difficult with adolescents in residential behavioral programs (Florsheim et al., 2000; Shirk & Karver, 2003). Shirk and Karver (2003) performed a meta-analysis on 23 studies that looked at the effect of the therapeutic alliance upon treatment
outcomes across different treatment modalities with children and adolescents. They found a moderate effect size of $r = .24$ which is commensurate to the findings of Horvath and Symonds (1991) and Martin et al. (2000) with adult populations. Shirk and Karver also found that the effect of therapeutic alliance for adolescents was the same across treatment modality (behavioral vs. non-behavioral and manualized vs. non-manualized). They concluded that the therapeutic alliance was related to outcome regardless of type of treatment and the strength of the relationship is similar to that found in adults. They further commented that forming a strong therapeutic alliance with youth who display more externalizing behavior than internalizing behavior may be both more difficult and more essential in obtaining positive therapeutic outcomes.

To that end, Florsheim et al. (2000) performed a study to test the correlation between therapeutic alliance and treatment outcome on 121 adolescents who were in the custody of the youth correctional system living in a residential setting. Each youth was given the Working Alliance Inventory (WAI; Horvath & Greenberg, 1986) to assess the therapeutic alliance at 3 weeks and 3 months into therapy. The authors found that higher WAI scores at the second assessment of therapeutic alliance (3 months) were significantly associated ($p < .05$) with decreases in Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) internalizing and externalizing scores as well as recidivism (measured 1 year after discharge). They concluded that positive therapeutic alliance was associated with greater treatment success and was an active element in preventing future offending in adolescents.

In response to the unique challenge of establishing a strong therapeutic alliance with adolescent clients, Oetzel and Scherer (2003) proposed that a therapist must be not only empathetic and genuine, but also engaging and must meet the adolescent at their own level (both
developmentally and socially). The authors concluded that adolescents represent a unique population for therapy, as they are often resistant to therapy, suspicious of the therapist, and will not work actively to develop the therapeutic alliance. This often stems from a perception of inequality in therapy and from the fact that the adolescent feels that the therapist is inauthentic, or does not understand them (Oetzel & Scherer, 2003). Essentially, if a therapist can put the adolescent client (through any means possible) at ease and communicate that the therapeutic environment is a safe one of equality and acceptance, the likelihood of establishing a strong therapeutic alliance is greatly increased.

In summary, not only has the therapeutic alliance been demonstrated to correlate positively with treatment outcomes, it has specifically been linked to reduced recidivism in adults and adolescents (Florsheim et al., 2000; Martin et al., 2000). With this in mind, strategies that can improve the therapeutic alliance with adolescents (especially those in a residential setting) would contribute to therapeutic gains.

Music

Music plays a large role in the people’s lives, providing them with identity, joy, recall of memories, and activity, among a myriad of other benefits (Hallman, 2010; Miranda & Claes, 2009). Along with the incorporation of music in most everyone’s lives comes the influence that music has. Listening to music (both in a therapeutic setting and not) has been shown to influence consumer attitudes, elevate mood in listeners, improve physiology of the sick, lower levels of anxiety and stress, and help mediate psychological symptoms of mental illness (Dube, Chebat, & Morin, 1995; Longhi & Pickett, 2008; Marcela & Célec, 2010; Whipple, 2004).

The media, whether it is news, cinema, or advertising has long known the effect that music has on its listeners. Often during a moment of suspense or excitement in a movie or news
program the music will amplify in intensity, inducing heightened arousal in the viewer. This manipulation of the viewer’s mood through music is a tool the media uses to induce various experiences or emotions in viewers such as: anxiety, relaxation, tension, hope, excitement, and happiness (Lipscomb & Tolchinsky, 2005).

Music has also been demonstrated to affect more than emotion and mood, as it has been shown to influence overt behavior. Dube et al. (1995) found that when background music was played at a bank the customers increased their interactions with the employees. Similarly, North and Hargreaves (1996) found that playing music in a school cafeteria resulted in an increase in student visits, their interaction with the staff, and even a preference for the area of the cafeteria where the music was being played. Listening to music elicits very strong reactions in people, as it has been demonstrated that music can very impactful on both mood and behavior.

Music has also been used successfully in medical settings with medical procedures and in hospitalizations of pediatric cancer patients and burn patients to alleviate the pain and distress (Longhi & Pickett, 2008). Longhi and Pickett found that listening to performed music not only increased general mood by means of observation, but also increased oxygenation levels in the blood of long-term pediatric patients, causing the authors to conclude that listening to music may have positive psychological effects on the chronically ill.

The field of psychology has also embraced the employment of music in therapy. The use of music, regardless of how it is specifically employed, has been shown to be effective in the treatment with autistic children and adolescents, as Whipple’s (2004) meta-analytic study found an moderate effect size of $r^2 = .77$ in studies that used music as an intervention. Whipple wrote that when working with an autistic community, music “regardless of its purpose or how it is used for a particular client,… achieves positive effects” (p. 103). Music therapists have extended the
use of music beyond the scope of autism to address a vast array of clinical presentations including depression, Attention Deficit Hyperactivity Disorder, reading disabilities, the effects of trauma, aggressive behavior, and anxiety (Marcela & Celec, 2010). Interestingly, while music therapists differ in the way that they use music in therapy (discussing musical lyrics, musical composition/songwriting, joint singing, and musical games), there is no consensus as to which specific use is more effective or even what the mechanism of change is among the different musical modalities (Silverman, 2011). It is therefore possible that music listening, the one constant among different music therapy applications, is in itself therapeutic.

The effects of listening to music (either as a therapy, for pleasure, or from the media) appear to be especially acute among adolescents, as they listen to an average of 2.52 hours of music a day in an effort to “help get through difficult times” and to “relieve tension/stress”, among other reasons (Tarrant, North, & Hargreaves, 2000; p. 169). Such a population that spends almost 16 percent of their waking hours listening to music of some form are likely getting something positive out of it. It has been proposed that listening to music, whether in therapy or not, can have an adaptive coping utility for adolescents, as it acts to help regulate emotion (Miranda & Claes, 2009). Listening to music may also help adolescents develop a sense of self, connection and belonging, support in troubling times, alleviate loneliness, develop social skills, and increase emotional sensitivity and awareness (Hallman, 2010). Conversely, listening to music has also been shown to have negative consequences. Miranda and Claes found that listening to Metal music can increase depressive symptoms in female adolescents and Adriano (2010) found that listening to music while completing homework assignment resulted in lower Math and English grades in high school students. Adolescence, a time of strife and growth both
personally and within the larger structure of society, is a formative time and music can be a valuable source of gain in promoting adaptive adolescents.

Therapeutically, being aware of the impact that music has on adolescents, psychologists can utilize that influence in sessions as well. Broh (2002) found that students who engage in musical extracurricular groups talk to their parents and teachers more than students who do not. This talking and sharing of their lives to parents and teachers might generalize to therapists as well and might help to improve the therapeutic alliance. If adolescents who have more musical exposure are more likely to communicate with their caregivers, then maybe listening to music in session could result in increased sharing in-session with therapists. That sharing and increased disclosure could, in turn, help to strengthen the therapeutic alliance. If adolescents use music to, among other things, feel grounded and safe, maybe the playing of music in session could help to establish an environment that is not intimidating and threatening, but rather one that is familiar and welcoming. This could help to lower the defenses of the suspicious adolescent and possibly allow for a stronger therapeutic alliance.

**Hypothesis**

Establishing a strong therapeutic alliance has been shown to be essential when conducting therapy, as it correlates with successful outcomes and lowers recidivism rates in adolescents (Florsheim et al., 2000). Research has further demonstrated that therapy with adolescents presents further challenges and as such, it is even more important to establish a strong therapeutic alliance. Establishing a therapeutic alliance with adolescents presents a particular challenge, as they are often opposed to the idea of therapy to start with or possibly feeling that they are being patronized or manipulated, which results in a rejection of the therapist and the process (Keen, 2004). With that in mind, the idea proposed by Oetzel and Scherer (2003)
of meeting the client where they are and being authentic is of the utmost importance when working with adolescents. Given the influence that music has upon all people, and especially on adolescents, might the addition of music to therapeutic sessions help foster a safe, familiar environment and thus aid in the formation and growth of the therapeutic alliance?

I hypothesize that the success that social workers and music therapists have found with widely varied uses of music in session can be mainly attributed to the actual listening to music, and less so to the way that music is used in a session. This hypothesis is given credence by Silverman (2011), who stated that various methods of using music in therapy have proven to be equally successful, and that there is no consensus as to the best way to use music in session. Whipple (2004) wrote that music, regardless of its use, is helpful to autistic communities. Given Silverman and Whipple’s statements, I hypothesize that music, with all of its know associations and influences upon mood and behavior, might be effective in improving the therapeutic alliance because it, among other things, creates a fostering and comfortable environment and provides a safe, familiar stimulus. Essentially, could the presence of music in session improve the therapeutic alliance?

Plan

To test this idea, I propose to conduct individual therapy as usual with an adolescent client and then introduce music to the therapeutic environment, observing its effect on therapeutic alliance. In order to measure the effects of the music only, it would be playing in the background at the start of the target sessions and not overtly discussed or addressed. This would be done in an attempt to control confounding variables such as the impact of this discussion on the therapeutic alliance. The music would be playing upon the client’s arrival to the target sessions in an effort to avoid having him choose the music we listened to. This would act to
eliminate any sense of ownership of the music, or a feeling that I was deferring to the taste of the client, as I want to test the effect of music listening and not a sense of ownership or giving the client control and choice in therapy. If confounding variables could be controlled for by pre-selecting the music and not addressing its presence as much as possible, then it would be likely than any changes in the therapeutic alliance could be associated to the addition of the music.

**Method**

**Participant**

This study was comprised of a single male subject who was 14-years-old and who self-identified as “Latino”. This study was conducted at a large residential treatment program for emotionally and behaviorally adolescent males in a Northwestern State. The subject was referred by the State Youth Authority and carried the following diagnoses: Oppositional Defiant Disorder, Cannabis Abuse Disorder, and Attention Deficit-Hyperactivity Disorder. I utilized a cognitive behavioral approach to therapy (CBT), meeting with the subject at least weekly for individual therapy sessions. CBT is an action-oriented therapy that posits thoughts, emotions, and behaviors are interrelated and impact symptom presentation. A change in any one of those domains will affect the others. While emotions are the target of change, thoughts and behavior are often the mechanism of change. The subject, as well as his legal guardian was informed of the purpose of this study as well as any potentially harmful effects that might be a byproduct of the study. The subject’s legal guardian provided consent (see Appendix A) and the subject provided assent to participate in this study (see Appendix B).
Independent Variable

The independent variable for this study is the addition of music (MA) to the therapy session and was present for two of the phases. As stated earlier, the music is introduced with as little discussion as possible in an effort to isolate its effect upon the therapeutic alliance.

Upon review of the literature, I would play contemporary music as opposed to classical music. Contemporary music that adolescents can connect with is safe and familiar and might elicit more engagement than music they are not familiar with or do not even like. Also, from a dynamic perspective, Rosenblum, Daniolos, Kass, and Martin (1999) proposed that popular music such as rock and roll or rap is preferred in therapy with adolescents when fostering a bond due to familiarity and association, and because the actual rhythmic, repetitive nature of rock and roll and rap more closely resembles the maternal heart beat in utero, making rock and roll and rap more “unconsciously recognizable” than less repetitive classical music.

I would also only play the wordless instrumental version of the songs that I chose, as to eliminate any distractions from the sessions, while still delivering a recognizable tune that was comforting and safe to the client. Such music can be found on online at music stores such at iTunes and Rapture, and are best for this use in their “karaoke” versions. Hopefully, this would maximize familiarity but reduce distractibility, as background music (with lyrics) has been shown to distract subjects and results in lower concentration and poorer performance on tasks that require “conscious effort” (Kampfe, Sedlmeier, & Renkewitz, 2010). Keen (2004) found success with playing lyric-less music in the background of session with his single subject design, as he wrote that listening to the playing of an acoustic guitar, “will often facilitate and ease the way for an adolescent to share emotional issues” (p. 367). The therapeutic process is enhanced as well as resistance being lowered. To better understand if simply playing background music will
be impactful enough on the client to effect therapeutic alliance, I defer to both North and Hargreaves (1996) and Dube et al. (1995) whose studies demonstrated that background music affected the behavior of many people in the loud settings of a cafeteria and a bank, not simply one client within session.

**Dependent Variable**

The dependent variable in this study is the client’s reported quality of the therapeutic alliance, measured by the Working Alliance Inventory (WAI; Horvath & Greenberg, 1986). Permission to use this copyrighted document was obtained from the author (See Appendix D). The WAI includes client and clinician reporting forms, each with 36 self-report items that constitute a total score as well as three subscale scores of Task, Goal, and Bond. The Task scale measures the amount of shared in-session work in which the client and clinician engage and the importance that each one assigns to it. The Goal scale measures the degree to which the client and clinician jointly agree upon the outcome (goal) of their work and equally recognize its importance. The Bond scale measures the relational element of therapy by assessing the attachment between client and clinician. Each item is presented in a Likert-type format, ranging from 1 (never) to 7 (always). Each subscale score ranges from 4 to 28, and the total score ranges from 12 to 84, with higher scores being indicative of greater perceived therapeutic alliance. The WAI and has been used in multiple studies to measure therapeutic alliance (Cecero, Fenton, Frankforter, Nich, & Carroll, 2001; Hanson, Curry, & Bandalos, 2002; Kokotovic, & Tracey, 1990; Tichenor & Hill, 1989).

During the construction of the items of WAI, Horvath and Greenberg first conferred with subject matter experts (SME’s), then twenty-one working psychologists to determine which items (of the ninety-one they originally created) would be included on the WAI. From the rating
given by both the SME’s and the working psychologists, the authors arrived at thirty-six final items that comprised the WAI. The authors then ran three separate studies (Greenberg & Webster, 1982; Horvath, 1981; Moseley, 1983) to test the reliability and validity of the WAI. For all of these studies, the WAI was given to adults aged 19 to 65 and administered on the third session of therapy. Even though the items of the WAI were developed on adults, other studies have since used it with minors aged 7 to 16 (Darchuk, 2007; Diamond et al., 2006; Karver et al., 2008; Kazdin, Whitley, & Marciano, 2006). Similarly, there are studies that have used the WAI to measure therapeutic alliance and administered it in every therapeutic session instead of starting in the third session (Brossart, Willson, Patton, Kiv-Lighan, & Multon, 1998; Sexton, Hembre, & Kvarme, 1996).

From their three studies, Horvath and Greenberg (1989) reported strong reliability for both client and clinician forms of the WAI, as the internal consistency was $a = .93$ and .87, respectively. The WAI’s strong reliability was confirmed by a later study that reported the internal consistency of the client and clinician form of the WAI to be $a = .94$ and .95, respectively (Cecero et al., 2001). Test-retest reliability after a 3-week time was reported at .80, with the subscales ranging from .74 to .66 (Plotnicov, 1990).

The WAI also has good validity, as it was compared to the Counselor Rating Form (CRF; LaCrosse & Bank, 1976) and the Empathy scale of the Relationship Inventory (RI; Barrett-Lennard, 1962). The WAI shares 40% of common variance with the CRF and 58% with the Empathy scale of the RI (Horvath & Greenberg, 1989). This high degree of overlap with other scales that purport to calculate the same construct indicates that the WAI holds adequate concurrent validity, and does a good job of measuring therapeutic alliance. Horvath and Greenberg also demonstrated adequate content validity by ratings from subject matter experts, as
well as through multitrait-multimethod analysis, in which they used the WAI and the Empathy scale of the RI as traits and counselor and client ratings as method and obtained validity coefficients ranging from .68 to .89.

One very important aspect of the WAI to note is that while independently both the client and clinician forms have very strong reliability and validity, they are not significantly correlated to each other (Cecero et al., 2001; Tichenor & Hill, 1989). That is to say, the WAI does a good job of measuring the client’s and the therapist’s perception of the therapeutic alliance independently, but as discussed there is a low correlation between the two. Tichenor and Hill explained this difference by stating that clients and therapists often do not agree on what therapeutic alliance even is and they also have differing views of its quality. They wrote that this difference in perception of the therapeutic alliance supports previous research which found a low degree of client-therapist agreement and consensus on views of therapeutic alliance. Since this study was intended to measure change in therapeutic alliance, and not a clinician’s prediction of the client’s perspective of the therapeutic alliance, only the client form of the WAI was utilized in this study.

Further, this study utilized the Short Form of the WAI (WAI-S; Tracey & Kokotovic, 1989). Tracey and Kokotovic (1989) created the WAI-S after they conducted a factor analysis of the original WAI to determine if the it best fit into one of three possible factor models: (a) one general factor model, (b) three specific factors model, or (c) a bi-level model. After running a confirmatory factor analysis on the data that they collected from 124 dyads of clients and clinicians, the authors concluded that the WAI was best represented by a bi-level model with a first-order factor (general working alliance) and three second-order factors (task, goal, bond). Additionally, the authors found that the client form of the WAI had greater factor loading than
the clinician form on all three scales and total score. Using their findings about the factor structure of the WAI, the authors ventured to create a shorter version to be more practical in clinical settings. In order to do so, they examined the individual items on each scale and pulled the four with the greatest factor loading to create the WAI-S. Tracey and Kokotovic (1989) reported that the 12 items of WAI-S have a very strong fit with the factors (total=.98, task=.90, goal=.90, bond=.92). The authors concluded that the WAI-S exhibited the statistically similar factor loading as the original version, and would be of greater clinical utility given its speed and ease of use and interpretation.

While Tracey and Kokotovic did not run second item analyses on the items that comprise the WAI-S, Busseri and Tyler (2003) continued the psychometric examination of the WAI-S by directly comparing the scores on the WAI-S to the WAI to determine validity. Busseri and Tyler gave both versions of the WAI to 54 college counseling center therapy dyads. The authors ran hierarchical linear modeling to calculate the regression coefficients for the relationship between the WAI and WAI-S scores given on the fourth session and the final session. The coefficients of the subscales and the total scores for the WAI-S and the WAI were very high, ranging from .88 to .97. The authors also examined predictive validity of both measures and found that they were strongly correlated in their association with outcome as measured as decrease in Symptoms Checklist 90-R (Derogatis, 1994), as they only differed by .02. Based on their findings, Busser and Tyler concluded that the reliability and validity of the subscales and total score of the WAI-S are commensurate to those of the WAI, writing that they could be used interchangeably in both clinical and research settings. The authors wrote that in light of their very similar psychometrics, one should question the use of the WAI, as it is longer to administer, and offers no statistical advantage.
Design

This study used the WAI-S to measure the strength of the therapeutic alliance between the subject and the therapist within a single subject case ABAB design. ABAB, or reversal designs, are often used in single subject cases and “represent methodologically powerful tools for demonstrating intervention effect” (Kazdin, 1982, p. 125). The ABAB design affords the researcher the ability to assess behavior over time, using the subject as his/her own control. While larger studies with numerous participants have multiple groups that either receive treatment or not in the ABAB design the single participant both receives and does not receive the treatment at different times, thus serving as both the control and treatment group (Barlow, Nock, & Hersen, 2009). It is the reversal phase in the ABAB design that strengthens the statistical power of this method. If, during this phase, scores return towards those established at baseline, there is good evidence that the treatment (independent variable) does impact the dependent variable.

The baseline condition (A₁) is: CBT treatment as usual (TAU) as well as the WT (TAU + WT). During this condition the quality of therapeutic alliance is measured using the WAI-S in an effort to establish a baseline value before the introduction of the MA. When determining the length of a phase, there are two methods from which to choose. The first is operating upon a pre-determined number of sessions per condition, and the second is letting the data dictate when to change conditions once a stabilization of scores is achieved. The second method is preferable, as establishing consistent levels of the therapeutic alliance is more important than a pre-set number of sessions, and because it is more consistent with clinical practice (Kazdin, 1982).
Once a baseline value of the WT is stable, the second condition ($B_1$) is introduced. This condition is TAU + MA + WT. The introduction of the music to the session is the proposed element of change and the quality of the therapeutic alliance is continuously measured.

After the participant is exposed to $B_1$ during the second phase, the first condition is re-introduced. During this reversal phase, the MA was removed and the condition is identical to baseline phase: TAU + WT. During the reversal phase the WT is continually monitored to determine if its levels returned to those recorded to baseline ($A_1$) or maintained the levels recorded during the intervention phase ($B_1$).

The final phase ($B_2$) is the re-introduction of the second condition: TAU + MA + WT. This phase allows for the re-evaluation of the effect of the MA on the WT. This phase is included in order to demonstrate that the MA does have an impact on WT, as the scores would again increase, as they did in $B_1$.

The expectation in this study is that the quality therapeutic alliance, as measured by the WAI-S, will increase during those phases that include music. It is generally accepted that after a baseline condition is established, the target behavior or skill will improve slightly with the introduction of the intervention, but then return somewhat to those levels found at baseline when the intervention is removed, only to increase to its greatest levels when the target condition is re-introduced (Bandura, 1971; Skinner, 1938). I think this will be true of the quality of the therapeutic alliance, as it will increase when music is first introduced, decrease somewhat when music is absent, and then increase again when the music is reintroduced.

**Results**

The baseline phase ($A_1$) in this study lasted three sessions, due to a flat trend line of scores on the WAI-S (see Figure 1). After stabilization in WAI-S scores was determined, the
condition was changed and music was introduced in what was the second phase (B₁). This phase also lasted three sessions before the reversal phase (A₂) was introduced. In order to re-establish a flat trend line in WAI-S scores, this reversal phase lasted four sessions. The final phase, the re-introduction of music (B₂), lasted three sessions.

As expected, when the subject was exposed to music during session, he experienced a stronger therapeutic alliance with the therapist, which was reflected in increased WAI-S scores during the intervention stages as compared to the baseline and reversal phases. The subject rated the quality of the therapeutic alliance higher during the phases when music was present.

*Figure 1*

**WAI-S Scores Baseline and Intervention Chart**

The subject rated the quality of the therapeutic alliance highly from the start of the study (71 out of a possible 84). These scores stabilized with a flat trend line that represented a stable rating of the therapeutic alliance. These stable scores were identified as the Baseline phase of the study of therapeutic alliance between the subject and the therapist.
Once music was introduced to music in session during the B₁ phase, the subject’s rating of the therapeutic alliance increased. While the subject rated the therapeutic alliance at an average of 70 (see Figure 2) during the three sessions of the Baseline phase, he rated the therapeutic alliance higher (mean = 75.33) when music was present. While this increase could be the result of maturation or history, this does not appear to be the case, as the subject’s rating of the therapeutic alliance dropped once the music was removed.

*Figure 2*

<table>
<thead>
<tr>
<th>WAI-S Mean Scores and Standard Deviations</th>
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<tbody>
<tr>
<td>Condition</td>
</tr>
<tr>
<td>A₁</td>
</tr>
<tr>
<td>B₁</td>
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<tr>
<td>A₂</td>
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<tr>
<td>B₂</td>
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</table>

The Reversal phase was comprised of four sessions, and was continued until a flat trend line in WAI-S scores was obtained. From the first session of the Reversal phase, the quality of the therapeutic alliance dropped from those rating obtained when music was present and continued to decrease over the duration of the phase until it stabilized. Once a stabilization of scores was established by the presence of a flat trend line, music was again introduced to determine if the decrease in therapeutic alliance rating was due to the removal of the music or to something else.

When music was reintroduced during the B₂ phase, the subject’s ratings of the therapeutic alliance increased greatly, even more than they did during the first administration of music. While his scores in four sessions in the Reversal phase averaged 71.5, the first time that the subject was re-introduced to music he rated the therapeutic alliance the strongest that it had ever
been (80). His scores only increased after that session as he rated the therapeutic alliance in the next two sessions when music was playing at 81 and 82 respectively.

Both the presence and absence of music were followed by notable changes in WAI-S scores. While the subject rated the therapeutic alliance between himself and the therapist highly from the start, he repeatedly rated it even higher when music was present. As expected, the quality of the therapeutic alliance seemed to increase over time, as the subject rated the therapeutic alliance higher during the Reversal phase (sessions 7-10) than during baseline (sessions 1-3) even when music was not present. That said, the impact of having music playing during session was apparent, as the subject’s lowest rating of the therapeutic alliance during a session when music was playing (73) was still higher than the highest rating that he gave during any session when no music was playing (72), and he consistently rated the therapeutic alliance higher during the sessions when music was playing.

**Conclusions**

The purpose of this study was to investigate whether an adolescent’s experience of the therapeutic alliance would improve when music was played in the background of sessions. It was hypothesized that the subject’s total score on the WAI-S would be higher during the sessions that music was playing. This hypothesis was based on questions drawn about the potential relationship between the importance of music in adolescents’ lives, meeting adolescents where they are at therapeutically, and past successful uses of music in session (Miranda & Claes, 2009; Oetzel & Scherer, 2003; Tarrant, North, & Hargreaves, 2000; Silverman, 2011; Whipple, 2004).

Employing an ABAB design for this study provided the flexibility that is often needed in clinical settings, while also delivering the methodological soundness found in larger studies (Bryson-Brockmann & Roll, 1996). One advantage of this design was the fact that the design
itself protected for some threats to internal validity. The effects of maturation, history, testing, and statistical regression were non-elements due to the fact that a return towards baseline levels of the therapeutic alliance during the reversal phase made such threats unfeasible (Tervo, Estrem, Bryon-Brockmann, & Symons, 2003). Previous studies such as those performed by Bussuri and Tyler (2003), Krupnick et al. (1996), and Florsheim et al. (2000) employed large-group designs, which are susceptible to the manageability of confounding variables. In order to produce empirically useful results, a study that utilized a method sound enough to control for maturation and history, such as this one was employed.

As expected, analysis of the data suggests that a relationship exists between the subject’s experience of the therapeutic alliance and the presence of music, based on the subject’s report of the therapeutic alliance on the WAI-S. The subject consistently experienced the therapeutic alliance as stronger during those sessions when music was playing in session. Due to the natural strengths of an ABAB design (Kazdin, 1982), it can be concluded that music had a distinct effect on the subject’s experience of therapeutic alliance due to the increased alliance rating during the intervention stages and the return to baseline scores during the reversal phase.

While it is unclear what specifically about listening to music caused the subject to rate the therapeutic alliance in those sessions higher, it is clear that the presence of music had a substantial impact, as the subject rated the therapeutic alliance highest during those sessions. The subject probably did not experience the playing of music as a reward, due to the fact that it was played during both intervention phases regardless of the subject’s clinical progress or success in his residential program. The music was never introduced or discussed within a context of, or in any way associated with, the subject’s performance. Further, because he had no control over the type or frequency of music being playing in session, the subject did not experience some sort of
ownership of the music, which further suggests that this was the music itself rather than having choice or control over the therapeutic process that produced the changes in WAI-S scores. It can also be inferred that the change element in this study was the subject’s *listening* to the music, as he was aware of its presence. It was noted that during the sessions that included music, the subject would often bob his head in rhythm with the music being played. On two occasions the subject even acknowledged the music in session, as he commented about its presence. This acknowledgment was not met with any discussion beyond agreement, as the purpose of the study was to examine the impact of listening to music in session and not music therapy in which the music and its meaning is discussed. For these reasons, and because of the strength of the ABAB design, it can be inferred that the agent of change in this study was most likely the listening to music during the intervention phases and not something else entirely.

The results of this study suggest that music can be used during therapy with adolescent males in an attempt to strengthen the therapeutic alliance. Due to the fact that this study only included one subject and only used music within the context of individual therapy, the findings cannot be generalized to populations other than the subject’s (a male adolescent in a residential program). That is to say that while reading this study might suggest that playing music in session will help to build the therapeutic alliance with all clients, across all settings, those conclusions have not been demonstrated in this study nor in any other study to date. The data were collected with a client in individual therapy; therefore, the findings cannot be generalized to group therapy or for use in a milieu setting. While the addition of music to those different modalities might well improve the alliance between client(s) and therapist, the findings from this study should not be used to make such claims.

**Limitations**
While this study had much strength in design, there were also limitations. The first limitation was the fact that the subject rated the therapeutic alliance between himself and the therapist very highly on the WAI-S from the onset of the study, which left little room for improvement during the intervention phases. If another measure that either had a higher ceiling or was more sensitive was used there might have been more chance for the data to demonstrate greater differences between the music and non-music phases. This increase in difference in scores between phases would make the findings of this study more robust and would further demonstrate the effect of listening to music in session.

Another potential limitation of this study was the fact that there might have been some subtle cues acted upon in either the subject or the researcher between stages. While measures were taken to keep all contingencies the same across the study except for music, there might have been subtle forces that influenced the subject’s experience of the therapeutic alliance beyond that of music. For one, the subject was briefed about the course of the study during informed consent (where all potential harmful effects had to be disclosed and discussed). The subject could still have been influenced by the discussed aim of the study “…we’re looking at the therapeutic alliance … and seeing if it can be improved using music…” (Appendix B) and been acting on an internal response, such as a self-fulfilling prophecy. Secondly, since I was both the primary investigator and the therapist in this study, I might have displayed some sort of confirmation bias, and treated the subject differently across phases. While I did all that I could to be consistent in my treatment, there was always the chance of something that I did not intend to be relayed to the subject that was out of my control during certain phases. In order to check my own behavior across stages, I could have videotaped the sessions and had them rated by an outside observer. I could have also continued the pattern of intervention and reversal stages for
longer, assuming that any differences in my own behavior would be negligible over time.

Finally, I could have someone else be the therapist in this study.

Another threat to the validity of the findings of this study rests with the timing and length of the stages. Due to the fact that a baseline measure of the therapeutic alliance (with a flat trend line) was developed after three initial sessions, the first intervention stage was also concluded after three stages. In retrospect, this was a flaw in execution, as the length of the different phases had become more important than the establishment of a true measure of therapeutic alliance within the intervention (music). Instead of letting the data dictate the length of the first intervention stage, the reversal phase was introduced after three music sessions, even though the quality of the therapeutic alliance seemed to be dropping slightly (see Figure 1). This was a mistake on the researcher’s part. Determined not to repeat the mistake, the length of the remaining stages were dictated by the absence of a slope and not a pre-set number of sessions. Further, the length of the study might have also had an impact on the results, as data collection lasted for less than 3 months. That said, there is evidence in the literature that most CBT-type interventions are best delivered in 16 sessions, so this study is just shy of that average (Leahy, 1996; Summerfield, 2008). Even though it is not probable, it is possible that the quality of the therapeutic alliance would start to trend down over time, thus indicating that music had less of an impact than the findings of this study suggest.

Even the varying of stages (especially since the stages were almost all the same length) might have produced some threats to internal validity, as the subject might have become aware of (either consciously or not) the changes in the environments and been suggestible to the difference. This threat of training could have influenced the subject to rate the therapeutic alliance qualitatively differently at different times.
Finally, this being a single case study, the results may not be completely generalizable. This limitation is inherent in all studies that have a small sample size and is a problem of range. Essentially, because only one subject was used in the study, it could be quite possible that he does not accurately reflect the larger population from which he was selected. Studies with more participants (and thus a larger range of the population) avoid this problem. One possible limitation due to range restriction in this study is that this particular subject may have reacted to the music in session in a manner that may be aberrant from the average adolescent client. It could be possible that this particular subject enjoys music, and is impacted by music more or less than the average adolescent. It is also possible that the subject had a particular affinity or aversion for the type of music played during session. If the subject had a dislike for the type of music (current popular music), the findings could have been very different. Similarly, the presence of music might have affected myself as well, and resulted in me acting differently during the sessions that it was playing. If another therapist had performed this study who had a different reaction to the music, the results might have been different. Further, playing the acoustic versions of the music might have had an impact as well. Even though it was contraindicated in the literature, having music with the lyrics included could have made the differences between phases even more robust. Since the music was selected before the start of the study and without the input of the subject, these questions cannot be answered through this study, nor can their potential impact on the study’s findings be examined.

**Future Directions**

While it is hard to generalize the findings of this study beyond the scope of individual therapy conducted with male adolescents in a residential setting, its implications can be repeated and further examined in the future. Future researchers are recommended to repeat this study with
different populations, in different settings. Further, this study should be repeated with both therapists and clients from different backgrounds than were in this study. It could be that different cultures have differential reactions to music and therefore listening to it could impact the therapeutic alliance differently. While this study could be seen as a pilot study of sorts, more studies similar in design and execution to this one with other populations or in other settings that produced similar results would give further credence to this study’s conclusions. A study design that used a therapist who was not also the primary researcher would help control for any agenda that the therapist might have. If the primary researcher and the therapist in the study were different people, the therapist could be kept in the dark (as much as possible) as to the aim of the study. Giving the WAIS to the client after each session without the knowledge of the therapist and starting the music before both the client and the therapist arrived to the therapy room might protect against any confirmation bias or self-fulfilling prophecy on the therapist’s part.

Given more time and money, a split between therapist and researcher, and a larger study that utilized a multiple baseline design with subjects (maybe even adults or children) from different backgrounds would further validate this study’s findings. Utilizing a multiple baseline model would be a strong next step in the continued confirmation of this study’s findings. Not only would a multiple baseline approach allow a researcher to have multiple subjects, it would also allow for the introduction of the intervention (music) phases at different times which would protect against the threat of training. Given that the quality of the therapeutic alliance will most likely not completely return to the level that it was during the first baseline condition simply due to growth between the therapist and client, a multiple baseline approach would be advantageous in producing even more evidence that listening to music increases the client’s experience of the therapeutic alliance.
In the meantime, before more studies can be performed that corroborate the findings of this study, the data collected suggest that clinicians working with adolescent males in residential settings could improve their therapeutic alliance by playing music during their sessions. The limitations of this study notwithstanding, the findings from this study, generated from a strong design, were rather robust and suggest that listening to music in session improves the therapeutic alliance with adolescent males.
References


In L. S. Greenburg, & W. M. Pinsof (Eds.). *The psychotherapeutic process* (pp. 529–556). New York: Guilford Press.


Appendix A

INSTITUTIONAL REVIEW BOARD
FWA: 00007392 | IRB: 0004173
2043 College Way | UC Box A-133 | Forest Grove, OR 97116
P. 503-352-1478 | F. 503-352-1447 | www.pacificu.edu/research/irb
Proposal to Conduct Human Subjects Research
Non-Autonomous Population – Permission Form

1. Study title
   Improving the Therapeutic Alliance with Adolescents Using Music

2. Study personnel

<table>
<thead>
<tr>
<th>Name</th>
<th>Niles Cook</th>
<th>Catherine Miller, Ph.D.</th>
<th>Steven Henry, Psy.D.</th>
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<tr>
<td>Program</td>
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<td>-</td>
<td>St. Mary’s Home for Boys</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:cook6980@pacificu.edu">cook6980@pacificu.edu</a></td>
<td><a href="mailto:millerco@pacificu.edu">millerco@pacificu.edu</a></td>
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<td>Telephone</td>
<td>(310) 903-0108</td>
<td>(503) 352-7324</td>
<td>(503) 259-3138</td>
</tr>
</tbody>
</table>

3. Study invitation, purpose, location and dates

Your child or ward is invited to participate in a research study on the potential relationship between music and the therapeutic alliance when conducting therapy with adolescents. The study will be conducted by the primary investigator who is a Master’s Level clinician in pursuit of a Doctorate in Clinical Psychology. The study consists of the principal investigator conducting therapy with your child (similar to what he would receive as a client of SMHB normally). At the end of each session your child will be asked to complete a short questionnaire about the quality of his therapeutic relationship with the principal investigator. During specific sessions music will be playing in the background while therapy is being conducted. The study is interested in determining if having the music playing for those sessions has any influence on the quality of the alliance.

Your child has been selected because his primary language is English, he has a sufficient reading level, and he has no previous contact with the primary investigator (Niles Cook, M.S.). The project has been approved by the Pacific University IRB and will be completed by Mr. Cook at St. Mary’s Home for Boys (SMHB). Data will continue to be collected during therapy sessions for approximately 3-4 months. The results of this study will be used to inform future therapeutic work with adolescent boys.
4. **Participant characteristics and exclusionary criteria**

To be eligible for this study, your child must be a client in SMHB residential program. English must be his primary language and he must have the reading level required to be able to understand and respond knowledgably to the Working Alliance Inventory (WAI; Horvath & Greenberg, 1986). If during the study, your child leaves SMHB, he will be no longer be able to participate in this study.

5. **Study materials and procedures**

Your child will be the only participant in this study. The study will consist of your child engaging in therapy with the primary investigator in much the same way that he would with any other therapist at SMHB. The purpose of the study is to investigate the therapeutic alliance between your child and the therapist and determine if and how it can be improved. Data will be collected at the end of each session by your child completing a questionnaire that should take only 5 minutes to complete. The study should not last longer than 3-4 months.

6. **Risks, risk reduction steps and clinical alternatives**

a. **Unknown risks**

It is possible that participation in this study may expose your child to currently unforeseeable risks, but the likelihood of this occurring is very low, as your child will be receiving the same quality of therapy (from either the principal investigator or a mental health therapist) whether or not he is a participant in this study.

b. **Anticipated risks and strategies to minimize/avoid**

The risks to your child are very minimal, as the treatment is not very different from the treatment they would receive at SMHB if they were not included in the study. There is a slight risk that your child may react negatively to the addition of the music and that reaction could negatively impact his experience of therapy.

c. **Advantageous clinical alternatives**

The alternative to inclusion in this study would be therapy from another therapist at SMHB that would look similar but not include music in the same capacity.

7. **Adverse event handling and reporting plan**

The IRB will be notified promptly when an unexpected adverse reaction occurs. Such a reaction may include, but are not limited to just those potential risks that have already been identified, but also consist of unexpected events as well.

8. **Direct benefits and/or payment to participants**

a. **Benefit(s)**

Due to the fact that this study will utilize the same treatment that your child would receive as an ordinary client at St. Mary's Home for Boys, there is no direct additional benefit to your child being a study participant.

b. **Payment(s) or reward(s)**

Participants will not be paid for your child’s participation.

9. **Promise of privacy**
Due to the nature of the study, and the fact that your child the primary investigator will be engaging in individual therapy, the identity of your child will be known during data collection. However, no identifying names or information will be published in the printed record of the study. All results and conclusions about your child will be discussed in a completely confidential manner. During data collection, the responses to the assessment will be kept in a locked, secure location that only the primary investigator has access to. If there is a confidentiality breach, the participant and his guardian will be contacted immediately. If child abuse is known or strongly suspected, the principal investigator is required to notify the appropriate authorities, keeping with SMHB policy. If your child is believed to be a threat to oneself or others, the investigator will notify the appropriate authorities. Upon completion of the study, therapy records for your child will be transferred to another clinician and treated with the same policies that St, Mary’s uses with all treatment records. Due to the fact that the collected WAI scores are data for the study, they will be kept separate from your child’s clinical file at St. Mary’s and will not be transferred to the next clinician. Data collected from the study will only exist until the study is completed and defended. At that time, all collected data will be destroyed and forms will be shredded. Until that time, the forms will be kept in a secure locked room within a locked file cabinet, per HIPAA confidentiality requirements.

10. Medical care and compensation in the event of accidental injury

During your child’s or ward’s participation in this project it is important to understand that he is not a Pacific University clinic patient or client, nor will be receiving medical care from Pacific University as a result of participation in this study. If he is injured during participation in this study and it is not due to negligence by Pacific University, the researchers, or any organization associated with the research, you should not expect to receive compensation or medical care from Pacific University, the researchers, or any organization associated with the study.

11. Voluntary nature of the study

Your decision whether or not to have your child participate will not affect his current or future relations with Pacific University or St. Mary’s Home for Boys. If he decides to participate, he is free to not answer any question or withdraw at any time without prejudice or negative consequences. If he chooses to withdraw after beginning the study he may do so merely by stating that he wishes to withdraw and end the study. In this case, his private information and any collected data will be destroyed in a secure manner.

12. Contacts and questions

The researcher will be happy to answer any questions you may have at any time during the course of the study. If you are not satisfied with the answers you receive, please call Pacific University’s Institutional Review Board, at (503) 352-1478 to discuss your questions or concerns further. If your child become injured in some way and feel it is related to participation in this study, please contact the investigators and/or the IRB office. All concerns and questions will be kept in confidence.

13. Statement of consent

Yes  No
O     O  I am the legal parent / guardian of ______________________________ (participant name).
I have read and understand the description of his participation duties and all questions have been answered to my satisfaction.

I grant permission for him to participate in this study.

I understand that the investigators will also obtain his independent assent before further activity.

I understand that I may withdraw my permission and/or that he may withdraw assent at any time without consequence.

I have been offered a copy of this form to keep for my records.

I give permission (and agree to the terms of the HIPAA Authorization below) for the researcher(s) to examine the case file, but to use only the information specifically described above.

Participant’s full name (please print)

Parent/guardian’s name (please print)

Parent/guardian’s signature Date

Principal investigator’s signature Date

**HIPAA Research Authorization**

**Authorization for the Disclosure and Use of Your Child/Ward’s Health Information**

By signing this authorization form, you are authorizing St. Mary’s Home for Boys (SMHB), including the Principal Investigator, Niles Cook, M.S., and other members of the research staff to use and disclose your child/ward’s (named below) health information for the following purposes: to complete a research study (Pacific University IRB #184-12) that is examining the effects of music on the therapeutic alliance. This health information includes general intake information, progress notes, and any other health information relating to this research study.

Your child/ward’s health information may be disclosed to Institutional Review Boards that review this research and state and federal government agencies, including, but not limited to, the Food and Drug Administration (FDA) and the Department of Health and Human Services regulatory agencies to make sure that it has been handled in an ethical and confidential manner. Health information that has been disclosed may be re-disclosed by the recipient of the
information; information that has been re-disclosed is no longer protected under this HIPAA authorization.

This authorization expires when the approved study that it is associated with is closed by the investigator and/or the Pacific University Institutional Review Board. All protected health information gathered throughout the life of the study will be destroyed in accordance with applicable regulations at this time. (The original health information and records will be maintained in the SMHB offices).

You have the right to revoke this authorization in writing, unless SMHB has already taken action relying on this authorization. You may revoke this authorization by writing to the Principal Investigator at cook6980@pacificu.edu. If you revoke this Authorization, your child/ward’s health information will no longer be included in this research study; however, information gathered up until that time will be included.

Your child/ward’s treatment will not be affected by your decision to grant, or not grant this authorization. As described previously in this permission form, your child/ward will receive the same care whether or not you grant this authorization.
Appendix B

Additional Assent

1. Study Title

Improving the Therapeutic Alliance with Adolescents Using Music

2. Study Personnel

<table>
<thead>
<tr>
<th>Name</th>
<th>Niles Cook</th>
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</tbody>
</table>

3. What this Study is About:

In this research study we're looking at the therapeutic alliance (the relationship between you and your therapist) in therapy and seeing if it can be improved using music. This study is being performed in an attempt to discover a way to improve the alliance between adolescents like you and their therapists.

4. Why you Qualify:

You were selected for this study because you are a client at St. Mary's Home for Boys and between the age of 11 and 17. English is your primary language and you have the required reading skills needed. You have also never worked with Mr. Cook. You do not have to agree to participate in this study, but if you do it could help improve the experience of therapy for you and other boys like you.

5. What will be Done:

During this study, you and the principal investigator will be conducting therapy together and at the end of each session you will be asked to fill out a short (12 questions) questionnaire. During some sessions music will be playing during therapy. You are not required to do anything besides participate in the therapy session just as you would otherwise and then complete the short questionnaire at the end of the sessions.

6. Benefits and Risks:
Due to the fact that this study will use the same treatment that you would receive as an ordinary client at St. Mary's Home for Boys, there is no direct additional benefit to being a study participant. Additionally, there is no compensation given for participation in this study that you would not receive as a client of SMHB. Your responses will help social scientists understand the effect of music on therapeutic alliance.

The risks of your participant in this study are very minimal, as the treatment (therapy as usual, and then therapy with music) would not be different from the treatment you would receive at SMHB if you were not included in the study. There is a slight risk that you will react negatively to the addition of the music and that reaction could negatively impact your experience of therapy. The alternative to inclusion in this study would be therapy from another therapist at SMHB that would look similar but not include music in the same capacity.

7. Participation is Voluntary:

Your participation is completely voluntary and you can choose to not answer any questions that you don't feel comfortable answering. You can stop at any time. If you decide to stop, we won't use any of your data or information that we have collected. If you decide to participate in this study, you should know that I will read your medical record and may record information about our sessions in that medical record.

8. Statement of Assent:

All of my questions have been answered and I agree to participate in this study. I understand that I may withdraw at any time, for any reason, without consequence.

_______________________________________________________  ______________
Participant's Name      Date

_______________________________________________________  ______________
Participant's Signature     Date

_______________________________________________________  ______________
Principal Investigator’s Signature    Date
Appendix C

Working Alliance Inventory-Client
Short Form (Client)

Client Case# __________  Counselor ID# __________  Date __________

Measurement Point (session number):

Instructions:
On the following page there are sentences that describe some of the different ways you might think or feel about your counselor.

As you read the sentences mentally insert the name of your counselor in place of ________ in the text.

Below each statement there is a seven point scale:

1  2      3      4   5       6  7
Never  Rarely  Occasionally   Sometimes  Often  Very Often  Always

If the statement describes the way you always feel (or think) circle the number 7; if it never applies to you, circle the number 1. Use the numbers in between to describe the variations between these extremes.

Work quickly, your first impressions are the ones we would like to see.

PLEASE DON'T FORGET TO RESPOND TO EVERY ITEM.

Thank You!
1. ______________ and I agree about the things I will need to do in counseling to help improve my situation.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
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</table>

2. What I am doing in counseling gives me new ways of looking at my problem.

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<th>Never</th>
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3. I believe ______________ likes me.

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4. ______________ does not understand what I am trying to accomplish in counseling.

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5. I am confident in ______________'s ability to help me.

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6. ______________ and I are working towards mutually agreed upon goals.

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7. I feel that ______________ appreciates me.

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8. We agree on what is important for me to work on.

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9. ______________ and I trust one another.

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10. ______________ and I have different ideas on what my problems are.

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11. We have established a good understanding of the kind of changes that would be good for me.

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12. I believe the way we are working with my problem is correct.

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</table>
Mr. Niles Cook
Pacific University
School of Professional Psychology
222 Se 8th Ave
Hillsboro OR
97123
United States

March 26, 2012

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"Can music increase the therapeutic alliance?"

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I would appreciate if you shared the results of your research with me when your work is completed so I may share this information with other researchers who might wish to use the WAI. If I can be of further help, do not hesitate to contact me.

Dr. Adam O. Horvath
Professor
Faculty of Education and
Department of Psychology

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Fax: (778) 782-1203
e-mail: horvath@sfu.ca
Internet: http://www.educ.sfu.ca/alliance/allianceA