

Conceptions of Adolescent Friendship Quality in Sport and Music Domains

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Abstract

Based on theory (Harter, 1978; Sullivan, 1953), the purposes of the present study were to (a) compare context-specific conceptions of friendship quality in youth sport and music, and (b) determine how friendship quality is related to motivational beliefs in sport and music. Adolescents ($N = 366$; $M_{age} = 12.9$, $SD = 1.0$) who were involved in both organized sport and music completed measures of domain-specific friendship quality, perceived competence, enjoyment, anxiety, and motivational orientation. For purpose one, a repeated-measures MANOVA revealed that (a) boys and girls rated their best sport friends higher in self-esteem enhancement and supportiveness than their best music friends, (b) boys rated their best sport friends higher in loyalty and intimacy, things in common, companionship and pleasant play, and conflict resolution than their best music friends, (c) girls rated positive friendship quality dimensions higher than boys, and (d) there were no domain or gender differences in perceived friendship conflict.

For purpose two, structural equation modeling revealed that (a) for sport, positive friendship quality dimensions were directly associated with perceived competence and indirectly associated with enjoyment, anxiety, and motivational orientation, and (b) for music, positive friendship quality *and* conflict were related to competence motivation variables. Gender moderator analyses revealed slight differences between boys and girls in the pattern of relationships between friendship quality and competence motivation variables in sport and music. Collectively, findings extend the knowledge base by (a) using theoretical frameworks to compare conceptions of friendship quality in two popular

extracurricular activities for youth, and (b) demonstrating the significance of friendship quality in motivational beliefs and orientations in sport and music.

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CHAPTER 1

INTRODUCTION

Extracurricular activities, such as sport and music, are optimal contexts to promote youth development (Roth & Brooks-Gunn, 2003; M. R. Weiss, Kipp, & Bolter, 2012; Weiss & Wiese-Bjornstal, 2009). Youth can develop and improve physical, psychological, emotional, and social skills through participating in activities including sport, music, and performing arts (Benson, 2003; M. R. Weiss & Wiese-Bjornstal, 2009). Across many extracurricular activities, significant adults and peers influence youths' development of personal and interpersonal competencies (Fredricks & Eccles, 2004; Hartup, 1996; Moore, Burland, & Davidson, 2003; M. R. Weiss, Amorose, & Kipp, 2012). However, less is known about context-specific features of social influence across multiple extracurricular activities.

Sport and music represent two of the most popular activities for youth (Child Trends, 2012, 2013). They are performance, skill-based activities that hold the potential for social evaluation by important others, such as coaches, instructors, peers, parents, and spectators (Horn, 2004; Lehmann, Sloboda, & Woody, 2007). Both are available as in-school or out-of-school-time activities, but sport typically occurs within a competitive environment whereas music performances are not always competitive. Another distinguishing factor is that being skilled in sport is associated with popularity for youth, but music ability is not (Adderley, Kennedy, & Berz, 2003; M. R. Weiss & Duncan, 1992). Finally, youth often learn sport skills with others in a team setting, whereas

children and adolescents most often learn a musical instrument in a private, individual setting. Thus, sport and music activities are similar and unique as performance domains.

Since both activities provide a context for interaction and cooperation among friends, peers are an important aspect of youths' experiences in sport and music activities (Patrick, Ryan, Alfeld-Liro, Fredricks, Hruda, & Eccles, 1999; A. L. Smith, 2007; M. R. Weiss & Stuntz, 2004). Peers become more salient during the adolescent years (Brown & Larson, 2009), as youth spend more time with and rely more heavily on friends and other peers for competence-related information and comparison (Horn, 2004). Rubin, Bukowski, and Parker (2006) distinguish three levels of peer influence: peer interactions, peer relationships, and peer groups. Peer relationships refer to the connection between two individuals who know each other and have a history of interactions. Friendship, one type of peer relationship, is the experience of having a close, mutual relationship, whereas friendship quality is defined as positive and negative features of friendships (Hartup, 1996; M. R. Weiss, Smith, & Theeboom, 1996). Across multiple activity domains, researchers report similar conceptions of friendship quality, such as companionship, intimacy/closeness, and help/assistance, as well as conflict and betrayal (Bukowski, Hoza, & Boivin, 1994; Parker & Asher, 1993; M. R. Weiss & Smith, 1999). Gender differences in friendship quality have also emerged; girls report higher levels of intimacy, esteem enhancement, emotional support, and conflict resolution, and boys report greater conflict and competitiveness (Furman & Buhrmester, 1985; Parker & Asher, 1993). Quality of friendships is related to cognitive, social, and emotional

development, such as social competence, psychological well-being, and coping strategies (e.g., Gifford-Smith & Brownell, 2003; Hartup, 1996; M. R. Weiss & Smith, 2002).

Sullivan's (1953) theory of interpersonal psychiatry has informed empirical studies of peer relationships (Hartup, 1996; Newcomb & Bagwell, 1996). Sullivan describes the significance of different peer relationships at various stages of development. He identifies peer group acceptance as most important during middle childhood (e.g., elementary school years) to develop social skills and fulfill youths' need for belonging. Late childhood and early adolescence are marked by the desire for a close same-sex friend to fulfill the need for interpersonal intimacy, as having a close friend helps to validate one's worth, facilitate feelings of security and psychological well-being, and promote social adjustment (Sullivan, 1953). Research in school and sport contexts support the developmental significance of peer acceptance and friendship research according to Sullivan's theory (Rubin et al., 2006; A. L. Smith, 1999; A. L. Smith, Ullrich-French, Walker, & Hurley, 2006).

Harter's (1978, 1981) competence motivation theory also emphasizes the importance of significant peers (as well as adults) in explaining motivational orientation and behavior. According to the theory, individuals are motivated to develop and demonstrate competence in specific achievement domains. Engagement in mastery attempts is influenced by reinforcement and modeling from significant others, which affects perceptions of competence, affective responses, and motivational orientations. Competence motivation theory is well supported in the physical activity and other performance domains based on emergent relationships among significant others,

perceived competence, affect, and motivational beliefs and behaviors (see Harter, 1992; M. R. Weiss, Amorose, & Kipp, 2012; M. R. Weiss & Phillips, 2015).

Sullivan's (1953) and Harter's (1978, 1981) theoretical frameworks are applicable to study friendship and motivational variables in sport and music. In two domains that are performance-based, the desire to demonstrate competence and engage in mastery attempts is realized when sport and music skills are on display for peers and others to influence and evaluate. In the current study, both theories guided research questions of friendship quality and motivational beliefs in sport and music.

In the sport domain, studies of the significance of friendships have been guided by theory. M. R. Weiss and colleagues (M. R. Weiss & Smith, 1999, 2002; M. R. Weiss et al., 1996) conducted a series of studies on friendship quality in sport. First, M. R. Weiss and colleagues (1996) interviewed children and adolescents about the positive and negative attributes of their best friend in sport. They generated a list of 12 positive dimensions and four negative dimensions of sport friendships. Employing information from their qualitative study, M. R. Weiss and Smith (1999, 2002) developed and validated a measure of sport friendship quality that revealed six dimensions of sport friendship—self-esteem enhancement and supportiveness, loyalty and intimacy, things in common, companionship and pleasant play, conflict resolution, and conflict. They found age and gender differences in friendship quality as well as a significant relationship between positive friendship qualities and enjoyment and commitment. Following this work, friendship quality has been examined in relation to psychological and motivational beliefs in sport settings (see M. R. Weiss & Stuntz, 2004; M. R. Weiss, Kipp, & Bolter,

2012). Positive friendship quality is related to favorable ability beliefs, affective responses, peer acceptance, motivation, and physical activity behaviors across multiple studies (Fitzgerald, Fitzgerald, & Aherne, 2012; McDonough & Crocker, 2005; Moran & Weiss, 2006; A. L. Smith et al., 2006; Ullrich-French & Smith, 2006, 2009).

Less research exists on friendships in music, but initial findings also demonstrate that peers are important in youths' music experiences (Bartolome, 2013; Kennedy, 2002). Researchers have examined participation motives for music ensembles and noted that friendships were primary reasons why children joined and remained in music activities (Adderley et al., 2003; Bartolome, 2013; Hewitt & Allan, 2012; Kennedy, 2002; Patrick et al., 1999). Patrick and colleagues (1999) reported that adolescents indicated a stronger sense of intimacy and companionship with co-participants than with other friends not in the activity. Kennedy (2002) explained that developing strong bonds with other choir members influenced youths' desire for sustained involvement. These findings point to the importance of friendships in music activities, similar to the importance of friends in the sport domain. However, additional research is needed to examine friendships in the unique context of music.

The social context in which activities occur is particularly relevant in the study of friendships (Hartup, 1996; Newcomb & Bagwell, 1995; Zabatany, Ghesquiere, & Mohr, 1992). Friendship qualities found in general school contexts are not necessarily equivalent to friendships in other contexts, and the influence of friendships on motivational variables may be specific to the context as well (A. L. Smith, 2007; Zabatany et al., 1992; Zabatany, Hartman, & Rankin, 1990). Similarly, it cannot be

assumed that all extracurricular contexts (i.e., sport and music) are equivalent either. Zabatany and colleagues (1992) highlighted the importance of context specificity when they revealed early adolescents' expectations of friendships depended on the activity they shared together. In sport and other competitive activities, friends were expected to demonstrate behaviors that enhanced one's positive self-evaluation (e.g., ego-reinforcement or preferential treatment), while in academic and social activities, friendship expectations included helping and accepting behaviors (e.g., having common interests), respectively. Poulin and Denault (2013) found that perceived quality of friendships was higher in supportiveness within team sports than for non-sport friends, but no differences in perceived friendship quality emerged between activity-specific and non-activity friends of performing artists. These studies demonstrate that friendship quality across domains is likely to be different and highlight the importance of examining context-specific friendships.

The relationship between friendships and motivational variables may also differ across activity domains. Researchers conducted interviews to assess the role of peers in motivation and commitment to sports and performing arts among talented adolescents (Fredricks, Alfeld-Liro, Huda, Eccles, Patrick, & Ryan; 2002; Patrick et al., 1999). Fredricks and colleagues (2002) reported that the opportunity to participate with friends or meet new friends contributed to adolescents' motivation to join sports and performing arts. Patrick and colleagues (1999) did not find differences in the role of peers in adolescents' commitment to their talent activity between sport and performing arts activities. These studies provided groundwork for examining friendships across different

contexts, but additional research with other designs and methods is warranted to further understand the significance of friendship in multiple contexts salient to adolescents.

To date, theories, frameworks, and empirical research point to the significance of peer relationships in youth sport and music activities. The present study was designed to extend previous research on friendship quality in sport and music contexts by addressing some limitations in the knowledge base. The first limitation is there has been little systematic research comparing the significance of friendship in sport and music. Given that sport and music activities are two of the most popular activities for youth and adolescents (Carver & Iruka, 2006; Child Trends, 2012, 2013), studies are important to understand similarities and differences of friendship quality between these two activities (Brown, 2013; Fredricks & Simpkins, 2013; Zarbatany et al., 1990, 1992).

A second limitation is that interview methods have predominated research on friendship quality in multiple domains (Fredricks et al., 2002; Patrick et al., 1999). These studies were valuable in revealing key concepts describing the importance of peers in multiple achievement domains. Horn (2011) stated that researchers can use qualitative research to design quantitative investigations that test theory-driven hypotheses, and some studies specific to peer relationships in sport have followed suit (e.g., Ntoumanis & Vazou, 2005; Vazou, 2010; Vazou, Ntoumanis, & Duda, 2005; M. R. Weiss & Smith, 1999, 2002; M. R. Weiss et al., 1996). With limited knowledge comparing peers in sport and music contexts, theory-driven studies using precise and appropriate quantitative methods have the potential to provide in-depth knowledge about domain differences in

friendship quality and relationships between friendship quality and psychosocial outcomes in these two activities.

A third limitation is sampling methods for comparing participants in sport and music. Samples have consisted of youth involved in sport *or* music activities, but not those involved in both sport *and* music (Bartolome, 2013; Kennedy, 2002; Poulin & Denault, 2013; M. R. Weiss & Smith, 1999, 2002). In studies with distinct samples of sport and music participants, it is possible that factors such as experience and motives might explain differences between groups. Others have assessed youths' experiences in sport and music separately, but did not have adolescents compare their experiences in both activities (Fredricks et al., 2002; Larson, Hansen, & Moneta, 2006; Patrick et al., 1999). Still others excluded participants in multiple activities in data analyses (Poulin & Denault, 2013). To understand youths' conceptions of friendship in sport *and* music, sampling methods should include youth who are actively involved in both activities and employ a design allowing direct comparison of their experiences across domains.

Finally, cross-context research on the developmental significance of friendships in sport and music has been primarily descriptive rather than guided by theory (Fredricks et al., 2002; Patrick et al., 1999; Poulin & Denault, 2013). Theory-driven studies go beyond description to explain and predict outcomes, thus contributing meaningfully to understanding processes that might guide peer-driven interventions in physical activity and music contexts. A study guided by appropriate theoretical frameworks for understanding friendships in multiple contexts can advance knowledge of the underlying peer mechanisms of influence.

Thus, based on theory and past research, the purposes of the present study were twofold. The first purpose was to compare context-specific conceptions of friendship in youth sport and music by assessing friendship quality among youth involved in both activities. This purpose was based on Sullivan's (1953) interpersonal theory of psychiatry, which states that friendships are especially important during late childhood and early adolescence. No hypotheses were forwarded due to limited research comparing domains. Because past research has found gender differences in friendship quality during adolescence (e.g., Parker & Asher, 1993; M. R. Weiss & Smith, 2002), boys and girls within sport and music activities were also compared. Based on past research, it was hypothesized that girls would report greater self-esteem enhancement and supportiveness, loyalty and intimacy, and things in common, while boys would report greater conflict in their domain-specific friendships.

The second purpose of the present study was to examine the relationship between friendship quality and motivational constructs in sport and music. This purpose was grounded in Harter's (1978, 1981) competence motivation theory, which highlights social influence, perceived competence, and affect as predictors of motivational orientations and behaviors. Figure 1 depicts hypothesized relationships among friendship quality and motivational variables, which were examined separately for sport and music. Friendship quality was expected to directly relate to perceived competence and indirectly relate to enjoyment, anxiety, and motivational orientation. Because context-specific differences in the relationships between friendship quality and motivational beliefs have not been studied, no specific hypotheses were forwarded. Gender was examined as a moderator of

the relationship between friendship quality and competence motivation variables because research has shown variations between adolescent girls and boys in friendship quality and perceived competence (e.g., Horn, 2004; M. R. Weiss & Stuntz, 2004).

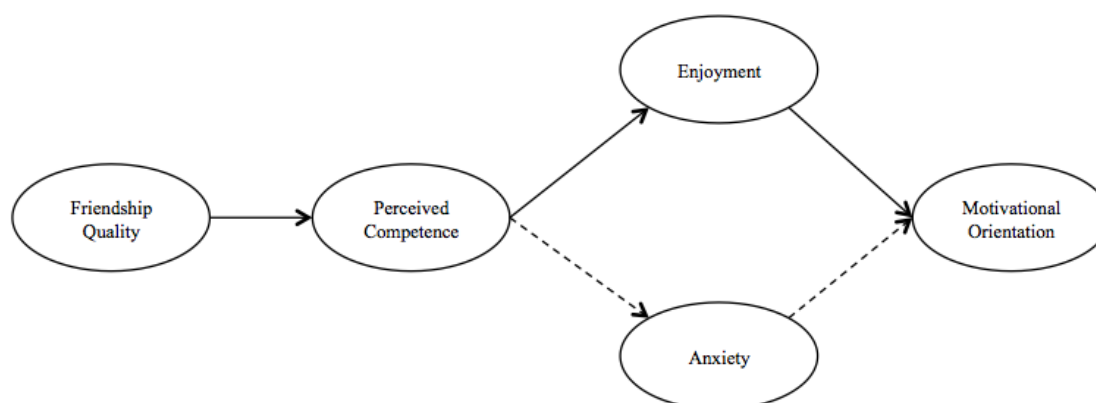


Figure 1. Model of Friendship Quality and Motivational Variables in the Present Study.
Note. Dashed lines represent hypothesized negative relationships.

In summary, the present study extended past research on friendship and motivational variables in several ways. First, this study directly compared the significance of friendship in sport and music contexts. Second, the study extended qualitative inquires on peer relationships in multiple domains by using quantitative methods to compare friendship quality and its relationship to competence motivation constructs in sport and music. Third, participants were currently involved in both sport and music activities to directly compare their experiences across activities. Finally, the study utilized theoretical frameworks (interpersonal theory of psychiatry and competence motivation theory) to guide research questions on conceptions of friendship quality and

relationships between friendship quality and motivational beliefs in sport and music activities.

In the following sections, I describe in greater detail theory and research examining extracurricular activities as a context for youth development, peer relationship and motivation theories and research, and friendship research in sport, music, and multiple domains. This review will logically lead to the purposes of the present study.

Extracurricular Activities as a Context for Youth Development

Researchers argue that participation in structured activities such as sport, music, and performing arts provide opportunities to develop a range of positive developmental outcomes, including context-specific physical skills; social, emotional, and psychological skills; and opportunities for engagement in one's community (e.g., Benson, 2003; Mahoney, Larson, Eccles, & Lord, 2005; M. R. Weiss, Kipp, & Bolter, 2012; M. R. Weiss & Wiese-Bjornstal, 2009). However, it is not simply involvement in extracurricular activities, but the structure and characteristics of programs that facilitate positive outcomes (Eccles & Gootman, 2002; Roth & Brooks-Gunn, 2003). Supportive environments that feature positive and caring adults and peers have the ability to maximize development of skills and opportunities. While research on youth development through extracurricular activities has increased in the past fifteen years, researchers have examined how features of the sport experience influence developmental outcomes for over thirty years (Gould, 1982; M. R. Weiss, 2008, 2013; M. R. Weiss & Wiese-Bjornstal, 2009).

Sport as Context for Promoting Youth Development

Historically, the sport domain has been seen as a context to develop physical, social, and psychological competencies (Gould, 1982; M. R. Weiss, 2008). Descriptive research shows that children participate in sport to develop these types of abilities (Gill, Gross, & Huddleston, 1983; Gould & Petlichkoff, 1988; M. R. Weiss & Petlichkoff, 1989). Other researchers have examined ways to maximize benefits and minimize negative outcomes for youth in sport (see Horn, 2008; M. R. Weiss & Williams, 2004). Early research on the benefits of sport participation for youth laid the foundation for viewing sport as a context for youth development (Wiggins, 2013). The following paragraphs provide three areas of research that exemplify youth development in sport.

One area of research in sport highlights the youth sport coach as a significant influence on children's psychological well-being (M. R. Weiss, Amorose, & Kipp, 2012; M. R. Weiss, Kipp, & Bolter, 2012). Since the late 1970s, coach characteristics, behaviors, and leadership styles have been examined in relation to developmental outcomes in young athletes (Amorose, 2007; Horn, 2008; R. E. Smith & Smoll, 2007). This longstanding research revealed several robust findings. First, contingent reinforcement and instruction by coaches are related to positive psychological and performance outcomes among players (e.g., Black & Weiss, 1992; Horn, 1984, 1985; R. E. Smith, Smoll, & Curtis, 1979; M. R. Weiss, Amorose, & Wilko, 2009). Second, a coach-created mastery motivational climate, where success is defined in self-referenced terms, is related to positive physical and psychological indices among youth (e.g.,

Newton & Duda, 1999; Reinboth & Duda, 2004; R. E. Smith, Smoll, & Cumming, 2007; Theeboom, DeKnop & Weiss, 1995). Finally, coaches who exhibit an autonomy-supportive leadership style are associated with youths' motivational orientation and sport satisfaction (e.g., Amorose & Anderson-Butcher, 2007; Coatsworth & Conroy, 2009; Gagné, Ryan, & Bargmann, 2003). The line of research on coach influence demonstrates a long-term commitment that sport has the potential to facilitate positive youth development.

Sport has also historically been seen as a context with the potential to develop moral character (e.g., M. R. Weiss & Bredemeier, 1990; M. R. Weiss, Smith, & Stuntz, 2008). McCloy (1930) argued that moral character could be taught through physical education when purposeful strategies are utilized to do so. Wiggins (2013) also noted that organized youth sport was used to promote values and moral principles in the early 20th century. Significant adults and peers influence youths' moral reasoning and behavior in sport settings through modeling and approval (e.g., Bolter & Weiss, 2013; Giebink & McKenzie, 1985; Mugno & Feltz, 1985; M. D. Smith, 1974, 1978). A number of intervention studies subsequently revealed the potential of deliberate strategies to improve moral attitudes and behaviors through sport (e.g., Gibbons & Ebbeck, 1997; Gibbons, Ebbeck & Weiss, 1995; Romance, Weiss, & Bockoven, 1986; Solomon, 2007). This research showed that prosocial attitudes and behaviors must be systematically taught if sport is to promote moral character.

Early research also demonstrated that sport holds the potential to promote youth outcomes such as self-perceptions, motivation, and peer relationships (e.g., A. L. Smith,

2007; M. R. Weiss, Kipp, & Bolter, 2012; M. R. Weiss & Williams, 2004). Positive sport experiences can enhance self-perceptions and motivation to persist in sport and physical activity (e.g., Ebbeck, 1994; Marsh, Gerlach, Trautwein, Ludtke, & Brettschneider, 2007; M. R. Weiss, Ebbeck, & Horn, 1997; M. R. Weiss & Frazer, 1995). Sport and physical activity also hold potential to develop positive peer relationships, including friendships (A. L. Smith, 2003, 2007; M. R. Weiss & Smith, 2002). These outcomes will be discussed later in this review. The next section will highlight similarities and differences in developmental outcomes across a variety of extracurricular activities.

Positive Developmental Outcomes in Multiple Domains

Besides sport, other extracurricular activities have the potential to promote youth development (e.g., Eccles & Barber, 1999; Larson et al., 2006; Mahoney, 2000). Some of these activities include music, theater, academic clubs, student government, Boy/Girl Scouts, religious groups, and community service. Studies show each type of activity can promote physical, emotional, psychological, and social outcomes (e.g., Dworkin, Larson, Hansen, 2003; Eccles & Barber, 1999; Larson et al., 2006). In the following paragraphs, personal and interpersonal outcomes are compared across multiple extracurricular activities.

Extracurricular activities including faith-based, prosocial, sport, performing arts, and vocational clubs and activities are associated with more favorable psychosocial development compared to individuals not involved in out-of-school activities (e.g., Barber, Eccles, & Stone, 2001; Dworkin et al., 2003; Eccles & Barber, 1999; Eccles, Barber, Stone, & Hunt, 2003; Hansen, Larson, & Dworkin, 2003; Larson et al., 2006).

For example, sport participants reported higher levels of self-esteem, initiative, and time management than individuals in other extracurricular activities. Youth in a variety of extracurricular activities can reap emotional and psychological benefits through participation (Larson et al., 2006; Mahoney et al., 2005).

Participation in extracurricular activities can also contribute to interpersonal competencies, such as positive relationships with adults and peers and contribution to one's community (Barber et al., 2001; Dworkin et al., 2003; Larson et al., 2006; Lerner et al., 2005). Adolescents reported that engagement in extracurricular activities allowed them to develop better communication skills, demonstrate leadership, and interact with adults (Dworkin et al., 2003; Eccles & Barber, 1999). Multiple types of extracurricular activities show the potential for developing positive social competencies.

Sport and Music Contexts

While there are many types of extracurricular activities available for youth, sport and music represent two of the most popular activities during childhood and adolescence. According to the National Household Education Surveys Program (Carver & Iruka, 2006), 73% of children in kindergarten through 8th grade participated in sport activities, whereas 42% participated in performing arts activities (music, theater, drama). Larson and colleagues (2006) found that 62% of high school students participated in sports and 45% participated in performing arts. Child Trends (2012, 2013) found that 50-70% of eighth, tenth, and twelfth grade adolescents participated in school sports and 33-50% participated in school-based music and performing arts activities. Given participation rates in sport

and music, these two activities deserve additional in-depth consideration as contexts for promoting youth development.

Sport and music are similar in the sense that they are both performance, skill-based activities (Csikszentmihalyi, Rathunde, & Whalen, 1993). Within both activities, specific skill sets are associated with successful participation. Sport participants learn sport skills and rules, and music participants must learn to play their instrument and read music (Lehmann et al., 2007; Magill & Anderson, 2013). In both activities, skill acquisition is primarily derived through instruction from an expert. Many children join a sports program to learn sport skills from a coach or take music lessons for playing an instrument from a private instructor.

Second, due to a focus on performance, sport and music activities elicit social evaluation by important others such as coaches, instructors, peers, parents, and spectators (Horn, 2004; Lehmann et al., 2007). Sport participants can be evaluated individually during private lessons, tryouts, or individual contests, while music participants are evaluated individually during private lessons, auditions, or solo performances. Evaluation within a group setting occurs during team practices and competitions for sport, and during rehearsals and ensemble performances for music. Peers are an especially salient source of social evaluation in sport and music, as peer comparison and evaluation are ways in which children judge their competence (Horn, 2004; M. R. Weiss, Bhalla, & Price, 2007). In both activities, the potential for negative social evaluation can cause high levels of stress and anxiety (Gould, 1993; Kenny & Osborne, 2006). Simon and Martens

(1979) found that band solo activities were associated with high pre-competitive state anxiety, followed by individual sports, and then team sports and music ensembles.

Finally, sport and music are available to youth in school-sponsored or out-of-school contexts (Patrick et al., 1999). Most middle schools and high schools have sports teams and instrumental and vocal music ensembles. In addition, youth have the ability to participate in sport through community or private teams/instructors, and they can participate in out-of-school music activities by taking private lessons or joining a community or private ensemble.

Though similar in several ways, sport and music activities contain different contextual features. In sport, individuals or teams compete against one another to determine a winner and a loser (Scanlan, 1996). In music, however, most performances do not have a competitive aspect. Most music performances are in the form of a concert, where an individual or ensemble performs prepared repertoire. Even though there are solo and ensemble contests, most competitions do not pit two individuals or ensembles against each other. Rather, music contests involve judges who rank individuals or groups based on certain criteria.

Second, popularity associated with participation is another distinguishing factor of sport and music activities. Youth high in physical ability are rated as popular (Chase & Dummer, 1992; Dunn, Dunn, & Bayduza, 2007), and both perceived and actual physical competence are related to peer acceptance (M. R. Weiss & Duncan, 1992). However, classmates do not view music participants as popular students (Adderley et al., 2003; Patrick et al., 1999). Adderley and colleagues (2003) and Patrick and colleagues (1999)

reported that music participants were referred to in derogatory terms such as “band geeks” or “orchestra nerds.” Findings demonstrate that music and sport participants do not hold similar levels of popularity among their classmates.

Finally, the context for skill acquisition differs between sport and music activities. Youth in sporting activities often learn sport skills in a team setting. Even individual sports, like gymnastics or swimming, hold team practices where participants learn and practice skills in the presence of others. Youth in music activities, on the other hand, often learn a musical instrument individually. Children take private music lessons with an adult expert to learn to play an instrument, rather than learn in a group setting. While both activities require individual practice outside of formal instruction to improve, formal instruction is commonly situated in group settings for sport and individual settings for music.

Similarities and differences between sport and music contexts help to explain unique aspects of each performance domain. However, little empirical research has examined how sport and music involvement contribute to youth development in similar or different ways. One main similarity between sport and music is the potential for peer comparison and evaluation (Horn, 2004). Regardless of which extracurricular activity youth are involved in, peers are an important socializer in sport and music contexts. In the following sections, I define and clarify peer constructs, relevant theories, empirical research in sport and music domains, and finally the purposes of the present study.

Definitions of Peer Constructs

Youths' experiences and interactions with peers are important for their socialization and development (Rubin et al., 2006). These experiences become even more salient during the adolescent years (Brown & Larson, 2009), as adolescents spend more time with friends in similar activities and develop strong ties. Peer experiences during youth and adolescence can be categorized as peer interactions, peer relationships, and peer groups (Rubin et al., 2006). Peer interactions refer to a social exchange between two individuals, such as reviewing musical techniques or practice strategies, encouraging others, or participating in rehearsal or practice. Peer relationships refer to the connection between two individuals who know each other and have a history of interactions (Rubin et al., 2006). Friendship, the most frequently examined type of peer relationship, is defined as the experience of having a close, dyadic, mutual relationship (Rubin et al., 2006; A. L. Smith, 2007). Friendships occur in multiple contexts, among classmates, neighbors, sport teammates, or music co-participants. A peer group is a network of relationships and is defined as a collection of individuals who interact and influence one another (Rubin et al., 2006). Examples of peer groups include sport teams and music ensembles. Within peer groups, peer acceptance is a key focus of study and is the degree that an individual is liked or accepted by their peer group (M. R. Weiss & Stuntz, 2004). For example, on a sports team, peers accept individual athletes based on their sport ability (Bigelow, Lewko, & Salhani, 1989; M. R. Weiss & Duncan, 1992). Though peer groups and interactions represent important levels of one's experience with peers, the present study focused on peer relationships, specifically friendships.

Hartup (1996) described three dimensions of friendship that demonstrate its significance to youths' well-being. These dimensions include: (a) whether one has a friend, (b) the identity or characteristics of one's friends, and (c) the quality of the friendship (Hartup, 1996; Hartup & Stevens, 1997). Children who have friends demonstrate greater social competence and adjustment than children without friends (Hartup, 1996; Newcomb & Bagwell, 1995, 1996). Well-adjusted and anti-social friends are likely to influence others differently, as friends tend to behave more similarly than non-friends (Hartup, 1996; Hartup & Stevens, 1997). Friendship quality is most relevant to the present study and is elaborated in the following paragraphs.

Friendship quality entails the positive and negative features of friendship, such as companionship, loyalty, or conflict, and can influence social development, psychological well-being, and coping strategies (Berndt, 2002; Hartup & Stevens, 1999). Researchers typically assess friendship quality by examining the type and frequency of friendship features (Hartup, 1996; Hartup & Stevens, 1997). Furman and Buhrmester (1985) examined types of social support from different members of a child's social network and determined that friends were rated highest on companionship and intimacy. Bukowski and colleagues (1994) conceptualized friendship quality according to five dimensions—companionship, conflict, help/aid, security, and closeness—whereas Parker and Asher (1993) ascribed six characteristics of friendship quality: validation and caring, conflict resolution, conflict and betrayal, help and guidance, companionship and recreation, and intimate exchange. Similar dimensions emerge across different ways of assessing friendship quality. Gender differences emerged dimensions of friendship quality; girls

report higher levels of intimacy, esteem enhancement, emotional support, and conflict resolution, while boys report greater conflict and competitiveness (Furman & Buhrmester, 1985; Parker & Asher, 1993).

Positive and negative qualities of friendship are related to cognitive, social, and emotional development (e.g., Berndt, 2002, 2004; Gifford-Smith & Brownell, 2003; Hartup & Stevens, 1997, 1999; Hartup, 1996; Newcomb & Bagwell, 1996). Ladd, Kochenderfer, and Coleman (1996) determined that validation and aid were associated with positive attitudes toward school and perceived classmate support. They also found that perceived conflict was associated with maladaptive qualities, such as higher levels of loneliness and lower levels of school engagement (Ladd et al., 1996). This demonstrates the profound impact that friendships can have on children's development.

In addition to friendship quality, other terms are used to describe the characteristics of peer relationships among friends. Friendship expectations are defined as attributes or qualities that an individual would like their friend to possess or portray (Bigelow et al., 1989; Zarbatany et al., 1990, 1992). There is an inherent positive nature to friendship expectations, while friendship quality can denote positive or negative features of the relationship. Social provisions, or friendship provisions, is another term for the qualities provided within a relationship (R. S. Weiss, 1974). Likewise, social support is a more general term for assistance from others (Furman & Buhrmester, 1985). Friendship quality, friendship expectations, social provisions, and social support are synonymous in referring to attributes of interpersonal relationships with peers.

Overall, peers have great importance to children and adolescents. Many theories and frameworks have been developed to conceptualize the influence of peer relationships. One area in which peers, especially friendship relations, are especially important is with regard to motivation. Theories of peer relationships and motivation are useful as guides to understand and explain behaviors in achievement contexts. General and context-specific theories of peers and motivation will be described next.

Theories and Frameworks Relevant to Peer Relationships and Motivation

Much of the research on peer relationships has been atheoretical (Furman, 1993, 1996). In the next sections, I describe theories relevant to peer relationships and motivational variables. For the purposes of the present study, I will review theories and frameworks that specifically feature peer influence or include social influence as an important predictor of motivational beliefs and behaviors.

Sullivan's (1953) interpersonal theory of psychiatry explains the significance of different peer relationships at various stages of development. His work describes the notion that both acceptance by peers and positive friendship are important to youths' development. During the juvenile stage (elementary school years), peer acceptance is the salient form of peer relations. Sullivan stated that the need for "compeers," acquaintances similar to oneself (p. 245), becomes important for the development of competitive and compromising efforts, stereotypic views, and perspectives on authority and ostracism. During the early elementary years, children become exposed to a larger social community (e.g., formal schooling, non-parent authority figures) and must navigate how to get along

with other peers and follow direction of new authorities. Transition from the juvenile era to preadolescence is marked by the desire for a close same-sex friend, or “chum”, fulfilling the need for interpersonal intimacy (Sullivan, 1953, p. 245). Sullivan stated that having a close friend in late childhood and early adolescence is important to validate one’s worth, facilitate feelings of security and psychological well-being, and promote social adjustment. In addition, friendships enable youth to move from an egocentric perspective to an understanding of the self in relation to others. Sullivan’s theory of interpersonal psychiatry highlights the developmental nature of peer relationships and reflects the salience of peer acceptance and close friendship at different stages of development in childhood and adolescence.

Attachment theory (Ainsworth, 1967, Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1973) is another relevant theory to the study of peer relationships. It focuses on the quality of the parent-child relationship during infancy, and states that this relationship has implications for children’s later development. Within a secure parent-child attachment, the parent or caregiver is available, warm, sensitive, and responsive, and the child can then develop and explore relationships outside the immediate family. However, when an insecure parent-child attachment develops, children’s exploration of their environment can be compromised. Development of secure or insecure attachment is related to the acquisition of social skills in children. A secure attachment is related to positive outcomes in later peer relationships, namely willingness to initiate relationships with peers, responsiveness to requirements of a peer relationship, sense of security, and

feelings of self-worth. The early parent-child relationship, according to attachment theory, has significant implications on youths' social development.

Positive youth development is a relevant framework for examining how social and environmental features of extracurricular activities promote competencies and positive assets. Children and adolescents develop an array of personal and interpersonal skills focused on their capacity to become positive and constructive contributors to society (e.g., Benson, 2003; Larson, 2000; Lerner et al., 2005). Peers play an important role in fostering positive experiences and behaviors; contextual features that support youth development include supportive relationships with peers, inclusion and belonging among group members, and positive social norms among peers (Eccles & Gootman, 2002). In addition, youth can develop interpersonal competencies such as empathy, sensitivity, and teamwork skills that influence their ability to relate to peers (Benson, 2003; Dworkin et al., 2003). A positive youth development approach features individual and social-environmental factors as components of structured programs that facilitate positive growth and development.

Each of the three theories and frameworks apply to youth contexts that consider peer relationships and outcomes. The components of these theories are not specific to a single domain. Motivation theories, however, relate to reasons for and consequences of participation in a specific context. Several theories of motivation are relevant to exploring peer relationships in sport and music contexts. I review the main components of three motivation theories: self-determination theory, expectancy-value theory, and competence motivation theory. Brief summaries of the first two are followed by a more

comprehensive review of competence motivation theory, as it served as the theoretical guide for the present study.

Self-determination theory is applicable to understanding motivation in extracurricular activities. The theory posits that the extent to which three psychological needs—perceived competence, perceived autonomy, and perceived relatedness—are satisfied is related to an individual's level of self-determined motivation and indices of well-being (Deci & Ryan, 1985; R. M. Ryan & Deci, 2000). Perceived competence indicates that an individual believes she/he is capable and proficient at an activity. Perceived autonomy is the belief that an individual has freedom of choice in his/her actions. The need for relatedness refers to an individual's desire for secure and positive relationships with others. In extracurricular activities, individuals develop a sense of relatedness with adults and peers (Kipp & Weiss, 2013). Social-contextual factors, such as social influence from parents, teachers, and peers, facilitate or hinder satisfaction of these psychological needs and affect motivation and well-being (Deci & Ryan, 1985; Adie, Duda, & Ntoumanis, 2012; Amorose & Anderson-Butcher, 2007). Thus, peer influence is one example of social and environmental factors that affect motivation and well-being through mediation of the three psychological needs (i.e., individual factors).

Eccles and colleagues' (1983) expectancy-value theory focuses on motivational factors that influence individuals' achievement behaviors in school-sponsored and out-of-school activities. Achievement behaviors, such as activity choice, persistence, and performance, are directly influenced by expectations for success and subjective task values, and indirectly influenced by significant adults and peers and other social-

contextual factors (Wigfield & Eccles, 1992, 2000). Peer influence is a social factor that is associated with expectations of success, task values, and achievement behaviors (Horn, 2004; Kennedy, 2002). Having peers who value participation in an activity is related to continued involvement in that activity (Kennedy, 2002). High expectations for success, or beliefs about performing well, lead to higher achievement behaviors in a particular activity. Subjective task value is defined as the significance an individual attaches to being successful in a specific achievement domain and is also positively related to achievement behaviors (Wigfield & Eccles, 1992). Social-contextual factors, including cultural beliefs, gender-role stereotypes, and significant others, have an indirect influence on youths' achievement beliefs and behaviors.

Competence motivation theory was conceived by White (1959) and expanded and updated by Harter (1978, 1981). White (1959) suggested that individuals have an inherent need to feel competent and are motivated to engage in mastery attempts to fulfill that need. While generic support existed for White's (1959) approach to effectance motivation, Harter (1978) elaborated upon White's (1959) model to transform constructs into measurable terms, testable hypotheses, and developmental considerations.

Competence motivation theory suggests that individuals are motivated to demonstrate competence in specific achievement domains and do so by engaging in mastery attempts at optimally challenging activities (Harter, 1978, 1981). Engagement in mastery attempts elicits reinforcement and modeling from adults and peers that influence perceptions of competence and control, affective responses, such as enjoyment or anxiety, and motivational orientations and behaviors. Positive reinforcement from adults

and peers, high perceived competence, internal perceptions of control, and positive affect (enjoyment) are theorized to increase competence motivation, while negative social influence, low perceived competence, external perceptions of control, and negative affect (anxiety) are associated with decreased competence motivation. Harter also addressed developmental trends in level, accuracy, and sources of perceived competence. Sources shift toward a preference for peer comparison and evaluation during and throughout adolescence, which affects perceived competence, affect, and motivational orientation within an achievement domain (Horn, 2004). Overall, Harter's (1978, 1981) competence motivation theory provides a framework for explaining how significant others, self-perceptions, and affective responses influence motivation in an achievement domain, such as sport and music. Competence motivation theory is applicable to the study of peer relationships and motivation in performance activities, such as sport and music, because it includes many variables relevant to motivation in performance domains—perceived competence, positive and negative affect, and social influence.

Collectively, these theories provide a sound guide for examining the importance of peers and motivation in sport and other performance contexts. Many researchers have used these theoretical frameworks when examining social influence and motivation in sport and music contexts. This has advanced the knowledge base of social influence and youth motivation in sport and music contexts.

Motivation Research in Sport and Music

Research on motivation in extracurricular contexts, particularly sport and music, began with descriptive studies of participation motives. Descriptive research informed theory development and subsequent theory-driven studies on youth extracurricular activity motivation. While sport research is predominated by theory-guided inquiry, research on motivation in youth music contexts has, to date, not consistently utilized motivation theories to guide research. In the following section, I review the descriptive and theory-driven research on youth sport and music motivation.

Descriptive Research

Many researchers in the 1970s and 1980s were interested in reasons why children participated in sport and physical activity (e.g., Alderman & Wood, 1976; Gould & Petlichkoff, 1988; M. R. Weiss & Petlichkoff, 1989). Some studies examined sport-specific participation motives (e.g., Gould, Feltz, & Weiss, 1985; Klint & Weiss, 1986), while others examined motives across a range of sports (Gill et al., 1983; Longhurst & Spink, 1987; Roberts, Kleiber, & Duda, 1981). Across studies three overarching reasons described why children participate in sport: (a) to develop and demonstrate physical competence, (b) to achieve social acceptance and approval, and (c) to enjoy their experiences (e.g., M. R. Weiss, 2013; M. R. Weiss & Amorose, 2008; M. R. Weiss & Williams, 2004). This research paved the way for identifying theoretical frameworks to guide research on physical activity motivation.

Descriptive studies also define research on participation motives in music. Using methods such as interviews and observations, researchers examined motivation to join

and persist in different music ensembles (Adderley et al., 2003; Bartolome, 2013; Hewitt & Allan, 2012; Kennedy, 2002; Kokotsaki & Hallam, 2007). Adderley and colleagues (2003) interviewed high school band, choir, and orchestra members and found that students joined a music ensemble because they were encouraged by family, wanted to develop musical skills, wished to become more well-rounded, and wanted to develop friendships and become part of a group. Adolescents were motivated to continue in musical activities for the enjoyment of developing skills, satisfaction in performing, preparation for future careers, increase in confidence, desire to be in a group and make friends, and development of social skills. Kokotsaki and Hallam (2007) determined that youth participated in music for three reasons: musical development (learning new skills and improving), social development (meeting new people, developing friendships and social skills), and personal development (cultivating work ethic, leadership, and confidence). Overall, participation motives for youth music derived from these studies include (a) developing and demonstrating musical competence, (b) becoming a part of a group and developing relationships, and (c) enjoying their experiences (e.g., Adderley et al., 2003; Kokotsaki & Hallam, 2007). These participation motives are comparable to those for youth sport and are present in relevant motivation theories.

Theory-Driven Research

Theory-driven research on motivation in sport and music has allowed researchers to extend beyond describing reasons to explaining and predicting beliefs and behaviors. In the following sections I review relevant theory-based research on social influence and

motivational outcomes, with a focus on studies that use competence motivation theory, as it served as the theoretical guide for the present study.

Social Influence and Perceived Competence. Youth use a variety of sources of information to judge their competence in a performance activity (Horn, 2004; Horn & Amorose, 1998; M. R. Weiss et al., 2007). Research on sources of competence information reveals developmental trends in the number and variety of sources used to discern one's ability at an activity (see Horn, 2004). These sources include peer comparison, evaluative feedback from parents, coaches, and peers, and performance outcomes such as win/loss record and personal performance statistics (Horn, 2004; M. R. Weiss et al., 2007). In early childhood, youth rely on parent feedback as a social source of competence information in addition to task mastery. During middle and late childhood, parental influence declines, while peer comparison increases in importance. In adolescence, children continue to use peer comparison and other sources of social influence, like coach feedback, to evaluate their competence; however, they also utilize internal or self-referenced forms of competence information (e.g., improvement, effort, goal achievement; Horn, 2004; M. R. Weiss et al., 2007). Adolescence is marked by a continued ability to distinguish and integrate information from a variety of sources of competence information (Horn, 2004). Empirical studies have found that peer influence (friendship quality and peer acceptance) is positively related to perceived competence (A. L. Smith, 1999; Ullrich-French & Smith, 2006; M. R. Weiss & Duncan, 1992). M. R. Weiss and Duncan (1992) determined that peer acceptance was related to perceived and

actual physical competence, while A. L. Smith (1999) determined that being accepted by one's peers was associated with more general positive feelings of oneself.

In the music domain, empirical studies of relationships between social influence and self-perceptions are less prevalent. Self-efficacy is positively related to music performance quality, and is also associated with continued participation in music activities (McCormick & McPherson, 2003; Ritchie & Williamon, 2011). Evans, McPherson, and Davidson (2012) used self-determination theory to explain why youth musicians dropped out of their activity. Participants reported reduced feelings of competence, autonomy, and relatedness when they decided to drop out of music compared to times when participants were more engaged in music activities. Some individuals who ceased playing their instrument reported unfavorable peer comparison as a reason for discontinuing. This study lends support to the notion that self-perceptions and influence by significant others are related to youths' continued participation in music.

Social Influence and Affect. Researchers have also examined the relationship between social influence and positive and negative affect in sport and physical activity (e.g., Babkes & Weiss, 1999; Gould, 1993; A. L. Smith, 1999). Significant adults and peers facilitate enjoyment and reduce anxiety in physical activity settings (Babkes & Weiss, 1999; Black & Weiss, 1992; Bois, Sarrazin, Brustad, Trouilloud & Curry, 2002; Brustad, 1988; A. L. Smith, 1999). Babkes and Weiss (1999) found that higher sport enjoyment was related to perceiving that parents had high beliefs about their child's ability, gave positive contingent feedback, and served as positive role models. A. L. Smith (1999) found that having a close friendship was positively related to enjoyment of

physical activity. However, fear of negative evaluations from parents, coaches, and teammates is a source of stress for young athletes (Gould, 1993) and negative relationships with significant adults and peers are additional sources of stress in sport (Gould, Wilson, Tuffey, & Lochbaum, 1993; Scanlan & Lewthwaite, 1984; Scanlan, Stein, & Ravizza, 1991).

In music, more attention has focused on music performance anxiety than on enjoyment of playing an instrument (e.g., W. J. Cox & Kenardy, 1993; Osborne & Kenny, 2005; Thomas & Nettelbeck, 2014). Hewitt and Allan (2012) reported that music ensemble participants enjoyed music rehearsal and performance experiences, specifically learning new repertoire and experiencing satisfaction after a successful performance. Bartolome (2013) found that female adolescent choir participants enjoyed interacting with other girls committed to music and being part of a supportive community. Likewise, significant others can influence performance anxiety, as performing in front of others is one key feature of music performance anxiety (e.g., W. J. Cox & Kenardy, 1993; Osborne & Kenny, 2005). W. J. Cox and Kenardy (1993) found that public performances elicited higher levels of performance anxiety than practices. Similar to sport, fear of negative evaluation from significant others is a source of performance anxiety for youth musicians (W. J. Cox & Kenardy, 1993). Parents, teachers, and peers influence enjoyment and anxiety in music, though additional research is necessary to further explore social influence on affective outcomes in music.

Social Influence and Motivation. In the sport domain, parents, coaches, and peers influence youths' motivation in sport and physical activities (e.g., Allen & Howe,

1998; Brustad, 1992, 1993, 1996; A. L. Smith, 1999; M. R. Weiss & Phillips, 2015).

Parents influence children's desire to participate by providing experiences, interpreting experiences, and modeling attitudes and behaviors (e.g., Babkes & Weiss, 1999; Bois et al., 2002; Brustad, 1992, 1996; Fredricks & Eccles, 2004). Coaches influence motivation through their beliefs, behaviors, and the way they structure the youth sport setting (e.g., Amorose, 2007; Black & Weiss, 1992; M. R. Weiss et al., 2009). Peers influence motivation through mechanisms such as peer acceptance and friendship quality (e.g., A. L. Smith, 1999; A. L. Smith et al., 2006; Ullrich-French & Smith, 2006, 2009). A. L. Smith (1999) found that having a close friend and being accepted by one's peers made independent contributions to cognitive and behavioral indices of physical activity motivation. Theory-driven studies support the importance of significant others in promoting motivational beliefs and behaviors.

In music, many descriptive, atheoretical studies have pointed to the role of significant others in facilitating music motivation (Davidson, Howe, & Sloboda, 1997; Lehmann et al., 2007; Moore et al., 2003). Parents and teachers influence children's motivation to continue participation by being involved in children's lessons, providing resources, encouraging children, and sparking youth's interest in an instrument (Creech, 2010; Davidson, Moore, Sloboda, & Howe, 1998; McPherson, 2009; Sloboda & Howe, 1991). Peers also influence youths' motivation through developing close relationships and maintaining group membership (Adderley et al., 2003; Kennedy, 2002). The only theory-based studies of social influence on motivation in music have examined goal orientations and the climate created by the instructor/conductor (Austin, 1991; Matthews,

& Kitsantas, 2012; Schmidt, 2005). For example, Matthews and Kitsantas (2012) found that a conductor's mastery goal orientation during rehearsal was related to participants reporting higher levels of self-efficacy and collective efficacy. Theory-driven studies on social influence and music motivation are needed to extend the knowledge base.

Harter's (1978, 1981) competence motivation theory is applicable to examine the role of friendship on motivational beliefs and behaviors in sport and music because of the emphasis placed on demonstrating competence and variables associated with perceived competence—positive and negative affect, and motivation. In two domains that are performance-based this is especially important, as the desire to demonstrate competence and engage in mastery attempts is realized when sport and music skills are on display. The specific context in which peer influence occurs also holds significance; research on friendship in sport and music domains, respectively, will be discussed next.

Friendship Research in the Sport Domain

Research regarding the importance of friendship in sport emerged in the past 20 years, but has not garnered the same amount of attention as significant adults, namely coaches and parents. Peer relationships are worthy of in-depth study because they are sources of participation motivation, competence information, and positive and negative affect (A. L. Smith, 2007; M. R. Weiss & Stuntz, 2004). The next section reviews research on friendship quality in sport, peer leadership in sport, and the relationship between friendship and sport motivational beliefs.

Friendship Quality

Friendship quality consists of positive and negative features of friendships and several studies identified features of sport friendship quality (e.g., Bigelow et al., 1989; M. R. Weiss & Smith, 1999; M. R. Weiss et al., 1996). For example, 9-12 year old children indicated that playing a team sport promoted the development of friendships that included intimacy, loyalty, and altruism (Bigelow et al., 1989). Early reports of sport friendship quality lend support to the positive role that friends can play in this context.

To advance the knowledge on the context-specific nature of friendships in the sport context, M. R. Weiss and colleagues (M. R. Weiss & Smith, 1999, 2002; M. R. Weiss et al., 1996) conducted a series of studies on sport friendship quality. First, M. R. Weiss and colleagues (1996) interviewed children and adolescents about positive and negative attributes of their best friend in sport. They generated a list of 12 positive dimensions and four negative dimensions of sport friendships. Positive dimensions included: companionship, pleasant play/association, self-esteem enhancement, help and guidance, prosocial behavior, intimacy, loyalty, things in common, attractive personal qualities, emotional support, absence of conflicts, and conflict resolution. The four negative dimensions of friendship were labeled conflict, unattractive personal qualities, betrayal, and inaccessible. Minimal gender differences were found in children's report of friendship dimensions. More girls (71%) discussed emotional support than boys (29%), but girls and boys mentioned other dimensions of friendship comparably.

Utilizing information from their qualitative study, M. R. Weiss and Smith (1999, 2002) then developed and validated a measure of sport friendship quality, the Sport

Friendship Quality Scale (SFQS). The final measure included six dimensions—self-esteem enhancement and supportiveness, loyalty and intimacy, things in common, companionship and pleasant play, conflict resolution, and conflict (M. R. Weiss & Smith, 1999, 2002). Some gender and age differences in sport friendship quality emerged from their work. Girls scored higher on self-esteem enhancement and supportiveness, loyalty and intimacy, and things in common than boys, while boys scored higher on conflict (M. R. Weiss & Smith, 2002). Younger children (ages 10-13) rated companionship and pleasant play higher than older participants (ages 14-18), who scored higher on dimensions of loyalty and intimacy, things in common, and conflict (M. R. Weiss & Smith, 2002). Though many dimensions of sport friendship quality are similar to those for general peer contexts, others were unique (M. R. Weiss et al., 1996).

Peer Leadership

Peer leadership in sport is an emerging area of empirical research on peer influence (e.g., Moran & Weiss, 2006; Price & Weiss, 2011, 2013). Some studies have examined personal attributes of peers seen as team leaders, and skill level, supportiveness, friendliness, and conflict mediation emerged as characteristics of peer leaders (Glenn & Horn, 1993; Moran & Weiss, 2006; Zacharatos, Barling, & Kelloway, 2000). Studies have also found that peer acceptance and friendship quality are related to higher peer leadership (e.g., Moran & Weiss, 2006; Price & Weiss, 2011). Individuals who reported higher quality friendship relations and acceptance by peers emerged as effective peer leaders (Moran & Weiss, 2006). Additionally, effective peer leadership is associated with motivational outcomes and team outcomes (e.g., Loughhead & Hardy,

2005; Paradis & Loughhead, 2012; Price & Weiss, 2011, 2013). Price and Weiss (2011) found that effective leadership behaviors were associated with athletes' perceived competence and motivational orientation. In addition, athletes' self- and teammate-reports of leadership behaviors was associated with more positive team outcomes including task cohesion, social cohesion, and collective efficacy (Price & Weiss, 2011). Collectively, these studies support the notion that individuals with high levels of interpersonal skills demonstrate competency among multiple types of peer relationships, and that effective peer interaction and leadership is associated with positive individual and team outcomes.

Friendship and Motivation

Friendship has been examined in relation to psychological and motivational constructs in sport and physical activity settings (see M. R. Weiss & Stuntz, 2004). Higher friendship quality (greater positive features, less negative features) is related to more adaptive motivational variables in sport, including higher perceived competence, self-worth, positive affect, commitment, and motivation, and less negative affect (e.g., McDonough & Crocker, 2005; A. L. Smith, 1999; A. L. Smith et al., 2006; Ullrich-French & Smith, 2006, 2009). A. L. Smith (1999) reported that close friendships and peer acceptance made independent contributions to physical activity motivation. Having a close friend in was related to greater enjoyment of physical activity and indirectly associated with motivational orientation and behaviors. He also found slight gender differences in the relationship between mechanisms of peer influence and motivational variables; the indirect relationship between close friendship and physical activity

behavior was significant only for females. A. L. Smith and colleagues (2006) examined peer relationship profiles of middle school sport participants and found that individuals with more adaptive peer profiles (higher positive friendship features, higher peer acceptance, and lower conflict) reported greater perceived competence, enjoyment, and self-determined motivation as well as less anxiety. Collectively, these studies show the positive role that friends can provide in promoting motivational variables in sport.

The importance of friendships within sport indicates that peer-based interventions can be effective at enhancing social relationships, perceived competence, and sport enjoyment. One series of interventions focused on the development of team building and cooperative outcomes in physical education to improve self-perceptions (Ebbeck & Gibbons, 1998; Gibbons & Ebbeck, 2011). Ebbeck and Gibbons (1998) found that after eight months of delivering a weekly cooperative activity, participants in the experimental condition reported meaningfully greater physical, social, and global self-perceptions. The supportive context of the physical activity environment may have improved social acceptance and friendships within the activity setting and influenced participants' self-perceptions (Ebbeck & Gibbons, 1998). These findings were replicated in their study of the team building intervention in gender-segregated classrooms for both boys and girls (Gibbons & Ebbeck, 2011). Interventions designed to enhance friendship and peer relationships in physical activity hold the potential to also influence other positive indices of motivation.

Research that includes peers alongside adult influence demonstrates the important role of friendships on motivational variables within a broader network of social

relationships. Friends have been examined alongside parents (e.g., Ullrich-French & Smith, 2006, 2009), coaches (e.g., Kipp & Weiss, 2013), and teachers (e.g., A. E. Cox, Duncheon & McDavid, 2009; A. E. Cox & Ullrich-French, 2010) in relation to motivational constructs in sport and physical activity. Kipp and Weiss (2013) found that friendship quality was positively related to self-esteem and positive affect and negatively related to disordered eating, whereas coaching behaviors, specifically mastery climate and autonomy support, were only related to positive affect among adolescent gymnasts. Ullrich-French and Smith (2006) found that parental influence, friendship quality, and peer group acceptance were related to sport enjoyment, stress, perceived competence, and motivational orientation among early adolescent soccer players. These studies demonstrate that the social network of relationships in sport uniquely and collectively contributes to youth outcomes.

Friendship Research in the Music Domain

There has been significantly less research on friendships in music compared to physical activity, though initial findings also demonstrate that peers are important in youths' music experiences. The following sections review the knowledge base on friendship quality in music, peer leadership in music, and the relationship between friendship and music motivational constructs.

Friendship Quality

While limited research has focused on the context-specific nature of music friendships, several studies noted positive and negative aspects of friendships in the

music domain. Patrick and colleagues (1999) reported that youth specified a stronger sense of intimacy and companionship with other adolescents in performing arts than with friends not in the activity. In addition, individuals had more similar attitudes and values as music friends than non-music friends (Patrick et al., 1999). Choir participants cited high levels of cooperation and companionship among friends in the ensemble (Bartolome, 2013). Finally, Hallam (2010) indicated that members of small music ensembles (i.e., chamber groups) reported trust and respect, intimacy, conflict, and conflict resolution as qualities of friendships. The friendship qualities reported in music activities are consistent with dimensions of friendship reported in other activity contexts.

Peer Leadership

Few studies have focused on peer leadership within the music context. In music settings, peer leadership is synonymous with peer mentoring and peer tutoring (Goodrich, 2007). Goodrich (2007) used ethnography to examine how peer mentoring in a high school jazz band facilitated success of the ensemble. Peer leadership qualities included high musical ability, time management, and organizational skills (Goodrich, 2007). In the ensemble, upperclassmen mentors demonstrated leadership behaviors by helping younger members with musical skills, such as sight reading and accompaniment, providing instruction during rehearsal, and introducing members to community jazz events. The band director guided these mentorship processes formally by meeting with potential leaders early in the school year, but many of the individual interactions and mentorship opportunities developed informally during the school year. Goodrich (2007) provides an

example of the ways in which peer leadership in the music setting can enable high levels of achievement.

Friendship and Motivation

Friendship has been examined in relation to participation motives in music activities (e.g., Adderley et al., 2003; Hewitt & Allan, 2012; Patrick et al., 1999). The majority of studies were not based on theory. Researchers noted that friendship and social reasons were primary reasons why children joined and remained in music ensembles (Adderley et al., 2003; Bartolome, 2013; Hewitt & Allan, 2012; Kennedy, 2002; Patrick et al., 1999). For example, Kennedy (2002) found that males in a middle school choir enjoyed developing friendships and maintaining group membership in the ensemble. Friendships were an important factor related to the initial decision to join a choir. In addition, participants reported that strong bonds of friendship developed in the choir influenced their continued participation (Kennedy, 2002). While many researchers reported that friendships and group belonging are related to motivation to join and persist in music, there are a few limitations associated with the knowledge base in this area. First, the majority of findings come from qualitative studies of individual music ensembles and thus generalizability is uncertain. Second, researchers operationalized motivation broadly and atheoretically, such as simply continued participation in the activity. Little research has focused on the role of friendships and other motivational variables within music, such as self-perceptions, positive and negative affect, and motivational orientation.

Research on friendship quality in the music domain is quite limited. Additional research is needed to assess the context-specific nature of friendships in music as well as to determine how friendship quality affects aspects of music participation. More research is also needed to examine friendship quality across multiple domains. In the next section, I review research on friendship across multiple achievement contexts.

Friendship Research in Multiple Domains

Only a handful of studies have examined social and motivational constructs across multiple achievement contexts (e.g., Eccles & Harold, 1991; Eccles, Wigfield, Harold, & Blumenfeld, 1993; Phillips & Weiss, in press; Simpkins, Fredricks, & Eccles, 2012). These studies found that domain-specific perceptions of competence and task values emerge as early as first grade and remain distinct through adolescence. This indicates that children are able to differentiate beliefs about their ability in multiple activities (e.g., sport, reading, math) and see various activities as more or less important early in life. Phillips and Weiss (in press) examined adolescents' motivation in multiple domains and found context-specific beliefs and behaviors in sport, music, and reading. Individuals who had higher competence beliefs in a domain also reported higher task values, parental influence, and participation in that activity. These studies lend support to the idea that achievement context should be taken into consideration when examining motivational constructs.

The activity context is particularly relevant when studying peer relationships. Many studies on friendships have been examined in a school setting. However,

conceptions of friendships in an academic context are not necessarily the same as friendships in sport and music contexts (A. L. Smith, 2007; M. R. Weiss et al., 1996; Zarbatany et al., 1992). The context in which friendships exist is an important consideration in examining friendship characteristics. Zarbatany and colleagues (1990, 1992) highlighted the importance of context-specificity when examining friendships across multiple domains. They explored the importance of peers in different activities for late elementary school children by having children keep diaries of important activities with peers and the liked/disliked behaviors of peers in each activity (Zarbatany et al., 1990). They determined that, collectively, activities with peers served three broad functions for youths: (a) offered sociability, relationship enhancement, and a sense of belonging; (b) promoted concern for success and positive self-beliefs; and (c) provided opportunities for instruction and learning (Zarbatany et al., 1990). However, individual activities served distinct functions, and acceptable peer behaviors were also unique to each activity. Zarbatany and colleagues (1992) extended their earlier study and revealed that expectations of friends were unique in different activities. In competitive activities (sports and games), friends were expected to provide ego-reinforcement, while in non-competitive activities (listening to music, talking on the phone), friends were expected to behave in ways to enhance relationships, such as enjoying similar types of music and taking turns talking. Finally, in academic activities, helping behaviors were expected of friends (Zarbatany et al., 1992). Because friendship expectations varied substantially across different contexts, the nature of friendships is specific to the context in which they occur.

Additional studies have examined context specificity in friendship qualities and revealed similar distinctions in different contexts. Patrick and colleagues (1999) determined that adolescents reported more intimate friendships with co-participants in sports and performing arts compared to individuals not involved in the activity. Poulin and Denault (2013) examined the quality and characteristics of friends in different out-of-school activities and found that friends in team sports were perceived to be more supportive than non-sport friends. However, they did not find any difference in friendship quality between friends of performing artists who were in the activity and friends not in the activity. Collectively, these studies demonstrate that the quality of friends in one context are distinct from friendships in other settings and highlight the importance in examining friendships in a specific social context.

Other studies have examined the influence of peers (e.g., friendships and peer acceptance) on motivation and commitment in different performance activities. Patrick and colleagues (1999) and Fredricks and colleagues (2002) used interviews to assess motivation and commitment to sports and performing arts among talented adolescents. Each study included 41 fourteen to eighteen year olds highly involved in performance activities (e.g., sports, music, theater). In cases where participants were involved in more than one activity, the same questions were asked about each activity separately, but participants were not instructed to compare their own involvement in multiple activities. Adolescents reported social benefits of activity participation (e.g., spend time with friends, make new friends, develop social skills, develop stronger friendships) and mentioned that the social aspect positively affected their activity enjoyment (Fredricks et

al., 2002; Patrick et al., 1999). However, peers also had the capability to diminish commitment toward an activity, especially when activity involvement took time away from friends (Patrick et al., 1999). Girls reported this negative feature of social influence more often than boys. Patrick and colleagues (1999) did not find any domain differences in the positive and negative roles of peers in adolescents' commitment to their talent activity. These studies provided groundwork for examining peer influence, specifically friendships, across different contexts, but additional research is warranted to further examine the influence of friendship on motivation in multiple contexts.

In summary, it is essential to consider context when examining the influence of peer relationships and friendships in multiple domains. Since friendship expectations and qualities vary by context, particularly in sport and music activities, cross-context research can reveal insight about the unique qualities of performance domains.

Purposes of the Present Study

To date, theories, frameworks, and empirical research point to the significance of peer relationships in youth sport and music activities. The present study was designed to extend previous research on friendship quality in sport and music contexts by addressing some limitations in the knowledge base. The first limitation is there has been little systematic research comparing the significance of friendship in sport and music. Given that sport and music activities are two of the most popular activities for youth and adolescents (Carver & Iruka, 2006; Child Trends, 2012, 2013), studies are important to

understand similarities and differences of friendship quality between these two activities (Brown, 2013; Fredricks & Simpkins, 2013; Zarbatany et al., 1990, 1992).

A second limitation is that interview methods have predominated research on friendship quality in multiple domains (Fredricks et al., 2002; Patrick et al., 1999). These studies were valuable in revealing key concepts describing the importance of peers in multiple achievement domains. Horn (2011) stated that researchers can use qualitative research to design quantitative investigations that test theory-driven hypotheses, and some studies specific to peer relationships in sport have followed suit (e.g., Ntoumanis & Vazou, 2005; Vazou, 2010; Vazou, Ntoumanis, & Duda, 2005; M. R. Weiss & Smith, 1999, 2002; M. R. Weiss et al., 1996). With limited knowledge comparing peers in sport and music contexts, theory-driven studies using precise and appropriate quantitative methods have the potential to provide in-depth knowledge about domain differences in friendship quality and relationships among friendship quality and psychosocial outcomes in these two activities.

A third limitation is sampling methods for comparing participants in sport and music. Samples have consisted of youth involved in sport *or* music activities, but not those involved in both sport *and* music (Bartolome, 2013; Kennedy, 2002; Poulin & Denault, 2013; M. R. Weiss & Smith, 1999, 2002). In studies with distinct samples of sport and music participants, it is possible that factors such as experience and motives might explain differences between groups. Others have assessed youths' experiences in sport and music separately, but did not have adolescents compare their experiences in both activities (Fredricks et al., 2002; Larson, Hansen, & Moneta, 2006; Patrick et al.,

1999). Still others excluded participants in multiple activities in data analyses (Poulin & Denault, 2013). To understand youths' conceptions of friendship in sport *and* music, sampling methods should include youth who are actively involved in both activities and employ a design allowing direct comparison of their experiences across domains.

Finally, cross-context research on the developmental significance of friendships in sport and music has been primarily descriptive rather than guided by theory (Fredricks et al., 2002; Patrick et al., 1999; Poulin & Denault, 2013). Theory-driven studies go beyond description to explain and predict outcomes, thus contributing meaningfully to understanding processes that might guide peer-driven interventions in physical activity and music contexts. A study guided by appropriate theoretical frameworks for understanding friendships in multiple contexts can advance knowledge of the underlying peer mechanisms of influence.

Thus, based on theory and past research, the purposes of the present study were twofold. The first purpose was to compare context-specific conceptions of friendship in youth sport and music by assessing friendship quality among youth involved in both activities. This purpose was based on Sullivan's (1953) interpersonal theory of psychiatry, which states that friendships are especially important during late childhood and early adolescence. No hypotheses were forwarded due to limited research comparing domains. Because past research has found gender differences in friendship quality during adolescence (e.g., Parker & Asher, 1993; M. R. Weiss & Smith, 2002), boys and girls within sport and music activities were also compared. Based on past research, it was hypothesized that girls would report greater self-esteem enhancement and supportiveness,

loyalty and intimacy, and things in common, while boys would report greater conflict in their domain-specific friendships.

The second purpose of the present study was to examine the relationship between friendship quality and motivational constructs in sport and music. This purpose was grounded in Harter's (1978, 1981) competence motivation theory, which highlights social influence, perceived competence, and affect as predictors of motivational orientations and behaviors. Figure 2 depicts hypothesized relationships among friendship quality and motivational variables, which were examined separately for sport and music. Friendship quality was expected to directly relate to perceived competence and indirectly relate to enjoyment, anxiety, and motivational orientation. Because context-specific differences in the relationships between friendship quality and motivational beliefs have not been studied, no specific hypotheses were forwarded. Gender was examined as a moderator of the relationship between friendship quality and competence motivation variables because research has shown variations between adolescent girls and boys in friendship quality and perceived competence (e.g., Horn, 2004; M. R. Weiss & Stuntz, 2004).

In summary, the present study extended past research on friendship and motivational variables in several ways. First, this study directly compared the significance of friendship in sport and music contexts. Second, the study extended qualitative inquires on peer relationships in multiple domains by using quantitative methods to compare friendship quality and its relationship to competence motivation constructs in sport and music. Third, participants were currently involved in both sport and music activities to directly compare their experiences across activities. Finally, the

study utilized theoretical frameworks (interpersonal theory of psychiatry and competence motivation theory) to guide research questions on conceptions of friendship quality and relationships between friendship quality and motivational beliefs in sport and music activities.

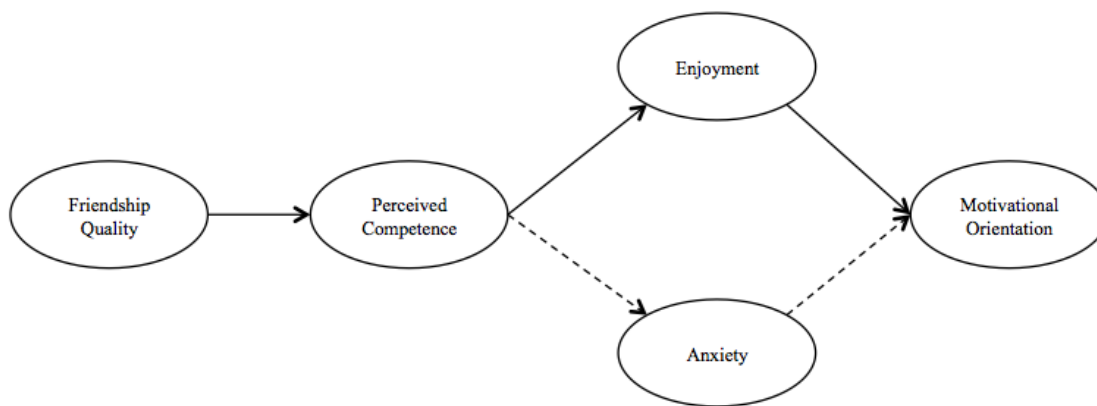


Figure 2. Model of Friendship Quality and Motivational Variables in the Present Study.
Note. Dashed lines represent hypothesized negative relationships.

CHAPTER 2

METHOD

Participants

A total of 366 youth who were currently involved in both organized sport and music activities participated in the present study. Participants included 211 girls and 155 boys in grades 5 to 9 ($M_{age} = 12.9$, $SD = 1.0$). Early adolescents were purposely chosen because peers are a particularly salient source of social influence during this developmental period, and peer comparison and evaluation are used to judge their competence in a particular domain (e.g., Brown & Larson, 2009; Horn, 2004; M. R. Weiss et al., 1997, 2007).

Participant eligibility involved four inclusion criteria. First, youth were involved for at least one season of sport and had performed in at least one concert with a music ensemble so they were able to respond to questions about friendships in both activities. Second, adolescents were involved in an *organized* sport program and music ensemble, meaning that there were coaches/conductors, formal practices/rehearsals, and competitions/performances. Organized, compared to informal, sport and music activities provide adolescents with more opportunities to interact with peers and develop domain-specific skills in a structured setting. Third, individuals were involved in interdependent sport and music activities in which they practice/rehearse and compete/perform as a group. For sport, this included team or individual sports where athletes interact to achieve performance outcomes; in music, this comprised group ensembles such as band, choir, or

orchestra. In these types of activities, participants encounter many experiences to cooperate and collaborate with peers in practices/rehearsals and competitions/performances. Finally, youth were involved in either school-sponsored or out-of-school-time sport and music programs because either type of program allows for chances to develop and nurture friendships.

Youth had participated in sport for an average of just over 7 seasons ($M = 7.26$, $SD = 6.02$) and played in 5 to 6 concerts ($M = 5.53$, $SD = 5.09$). Boys and girls reported similar number of seasons in sport and concerts in music. Most were involved in soccer (43.4%), basketball (12.9%), and volleyball (9.8%), while the most common instruments were voice (14.2%), trumpet (13.7%), clarinet (12.8%), and saxophone (10.9%). A listing of all sport activities and musical instruments by percentage of youth can be found in Appendix A. Participants identified as White (75.4%), Asian (7.1%), Hispanic/Latino (6.3%), African American (0.8%), Multi-racial (8.2%), and Other (2.2%).

Measures

I identified measures of friendship quality and motivational variables suitable for both sport and music activities. Most measures were designed for the sport domain and were adapted for music so that items would be parallel across domains. In the following sections, I describe each measure, including specific items, response format, and psychometric data.

Friendship Quality. The Sport Friendship Quality Scale (SFQS) was used to examine context-specific friendship quality (M. R. Weiss & Smith, 1999). M. R. Weiss and Smith (1999) found that a measure of general friendship quality (Parker & Asher,

1993) was not suitable to assess friendship quality in sport, so they developed and validated the SFQS through a series of studies to customize a measure specific to the sport domain. Based on similar features in sport and music (i.e., skill-based, performance-focused, evaluative contexts), the SFQS was deemed appropriate to assess friendship quality in both domains by modifying items as appropriate for music.

The SFQS contains 22 items that assess five positive dimensions of friendship quality (self-esteem enhancement and supportiveness, loyalty and intimacy, things in common, companionship and pleasant play, conflict resolution) and one negative dimension of friendship quality (conflict). To begin, participants wrote the first name of their best friend in their sport (and music) activity and used this friend as a frame of reference when responding to items. Individuals rated items on a five-point scale, ranging from “not at all true” to “really true.” Parallel items for sport and music are seen in Table 1. The SFQS has demonstrated content, factorial, and construct validity and internal consistency and test-retest reliability with youth ages 8 to 18 in organized sport (A. L. Smith et al., 2006; M. R. Weiss & Smith, 1999, 2002).

Table 1

Friendship Quality Items (adapted from M. R. Weiss & Smith, 1999)

Sport	Music
Self-Esteem Enhancement and Supportiveness	Self-Esteem Enhancement and Supportiveness
1. My friend and I praise each other for doing sports well.	1. My friend and I praise each other for doing music well.
2. After I make mistakes, my friend encourages me.	2. After I make mistakes, my friend encourages me.
3. My friend has confidence in me during sports.	3. My friend has confidence in me during music.
4. My friend gives me a second chance to perform a skill.	4. My friend shows me how to correct a mistake.
Loyalty and Intimacy	Loyalty and Intimacy
1. My friend and I can talk about anything.	1. My friend and I can talk about anything.
2. My friend and I stick up for each other in sports.	2. My friend and I stick up for each other in music.
3. My friend looks out for me.	3. My friend looks out for me.
4. My friend and I tell each other secrets.	4. My friend and I tell each other secrets.
Things in Common	Things in Common
1. My friend and I have common interests.	1. My friend and I have common interests.
2. My friend and I do similar things.	2. My friend and I do similar things.
3. My friend and I have the same values.	3. My friend and I have the same values.
4. My friend and I think the same way.	4. My friend and I think the same way.
Companionship and Pleasant Play	Companionship and Pleasant Play
1. My friend and I do fun things.	1. My friend and I do fun things.
2. I like to play with my friend.	2. I like to play with my friend.
3. My friend and I play well together.	3. My friend and I play well together.
4. My friend and I spend time together.	4. My friend and I spend time together.
Conflict Resolution	Conflict Resolution
1. My friend and I make up easily when we have a fight.	1. My friend and I make up easily when we have a fight.
2. My friend and I try to work things out when we disagree.	2. My friend and I try to work things out when we disagree.
3. When we have an argument, my friend and I talk about how to reach a solution.	3. When we have an argument, my friend and I talk about how to reach a solution.
Conflict	Conflict
1. My friend and I get mad at each other.	1. My friend and I get mad at each other.
2. My friend and I fight.	2. My friend and I fight.
3. My friend and I have arguments.	3. My friend and I have arguments.

Competence Motivation Constructs. Participants completed measures of context-specific perceived competence, enjoyment, anxiety, and motivational orientation for sport and music. Youth identified the sport and music activity in which they participate with their best friend and then responded to items according to that activity.

Perceived Competence. To assess beliefs about ability in sport and music, participants completed the physical competence subscale of Harter's (1988) Self-Perception Profile for Adolescents. This subscale consists of five items in a structured alternative format (see Table 2). Individuals were presented with two statements and asked to choose which statement is more like him or her. Then, they chose whether that statement is "sort of true for me" or "really true for me." Scores range from one (low perceived competence) to four (high perceived competence). Studies have reported construct and predictive validity and internal consistency reliability with adolescents involved in sport (Horn & Amorose, 1998; A. L. Smith, 1999; W. M. Weiss & Weiss, 2007).

Table 2

Perceived Competence Items (adapted from Harter, 1988)

Sport	<ol style="list-style-type: none"> 1. Some teenagers do very well at all kinds of sports BUT Other teenagers don't feel they are very good when it comes to sports. 2. Some teenagers think they could do well at just about any sport skill BUT Other teenagers are afraid they might not do well at a sport skill. 3. Some teenagers feel they are better than others their age at sports BUT Other teenagers don't feel they can play sports as well. 4. Some teenagers don't do well at a new sport BUT Other teenagers are good at new sports right away. 5. Some teenagers do not feel they are very skilled at sports BUT Other teenagers feel that they <i>are</i> skilled at sports.
<hr/>	
Music	<ol style="list-style-type: none"> 1. Some teenagers do very well at playing a musical instrument BUT Other teenagers don't feel they are very good when it comes to playing a musical instrument. 2. Some teenagers think they could do well at just about any instrumental skill BUT Other teenagers are afraid they might not do well at an instrumental skill. 3. Some teenagers feel they are better than others their age at playing a musical instrument BUT Other teenagers don't feel they can play a musical instrument as well. 4. Some teenagers don't do well at playing a musical instrument BUT Other teenagers are good at playing a musical instrument right away. 5. Some teenagers do not feel they are very skilled at playing a musical instrument BUT Other teenagers feel that they <i>are</i> skilled at playing a musical instrument.

Enjoyment. Youth were presented with three items to assess how much they enjoy participating in sport and music (see Table 3). Participants responded to items on a five-point scale, ranging from “not at all” to “very much.” Raedeke (1997) demonstrated convergent validity and he and others have shown good internal consistency reliability with youth involved in a variety of sports (M. R. Weiss, Kimmel, & Smith, 2001; W. M. Weiss & Weiss, 2003).

Table 3

Enjoyment Items (Raedeke, 1997)

Sport	Music
1. How much do you enjoy playing sports?	1. How much do you enjoy playing a musical instrument?
2. How much do you like playing sports?	2. How much do you like playing a musical instrument?
3. How much fun is playing sports for you?	3. How much fun is playing a musical instrument for you?

Performance Anxiety. For sport, participants completed the worry subscale of the Sport Anxiety Scale-2 (SAS-2; R. E. Smith, Smoll, Cumming, & Grossbard, 2006). The subscale contains five items that measure the cognitive dimension of competitive anxiety (see Table 4). Youth were instructed to indicate how they feel prior to or during competition. Items are rated on a four-point scale, ranging from “not at all” to “very much so.” The SAS-2 has demonstrated factorial, convergent, discriminant, and predictive validity as well as internal consistency reliability with youth ages 9 to 19 in sport activities (R. E. Smith et al., 2006, 2007).

Table 4

Sport Performance Anxiety Items (R. E. Smith et al., 2006)

1. I worry that I won't play well.
2. I worry that I will let others down.
3. I worry that I will not play my best.
4. I worry that I will play badly.
5. I worry that I will mess up during the game.

For music, participants completed the cognitive subscale of the Music Performance Anxiety Inventory for Adolescents (MPAI-A; Osborne & Kenny, 2005). The subscale contains seven items assessing thoughts before, during, or after

performances (see Table 5). Adolescents were instructed to indicate how often they experience each feeling specified in the item and responded on a seven-point scale, ranging from “not at all” to “all of the time.” The MPAI-A has demonstrated construct and convergent validity and internal consistency reliability with youth ages 11 to 18 in music activities (Osborne & Kenny, 2005; Osborne, Kenny, & Holsomback, 2005).

Table 5

Music Performance Anxiety Items (Osborne & Kenny, 2005)

1. I often worry about my ability to perform.
2. When I perform in front of an audience, I find it hard to concentrate on my music.
3. When I perform in front of an audience, I usually panic.
4. When I finish performing, I usually feel happy with my performance.
5. Just before I perform, I feel nervous.
6. When I perform in front of an audience, I am afraid of making mistakes.
7. I worry that my parents or teacher might not like my performance.

Motivational Orientation. Motivational orientation is associated with Harter’s (1978, 1981) conception of competence motivation or the desire to develop and demonstrate competence through mastery of optimally challenging skills (M. R. Weiss & Williams, 2004). Participants completed the challenge, independent mastery, and curiosity subscales of the Motivational Orientation in Sport Scale (M. R. Weiss, Bredemeier, & Shewchuk, 1985). The challenge subscale contains five items that assess individuals’ desire to engage in optimally challenging versus easy skills or activities. The independent mastery subscale contains five items that measure one’s preference for mastering skills on their own versus depending on a coach/teacher to help them. The curiosity subscale consists of four items that assess participants’ interest in learning and improving skills versus doing skills to comply with expectations from a coach/teacher.

Adolescents responded to items in a structured alternative format, with scores ranging from one (low intrinsic motivation) to four (high intrinsic motivation). Table 6 depicts items for each of the three subscales for sport and music. Factorial and convergent validity and internal consistency reliability have been demonstrated with youth ages 10 to 18 in sport activities (e.g., Black & Weiss, 1992; Brustad, 1988; Price & Weiss, 2011; M. R. Weiss et al., 1985, 2009).

Table 6

Motivational Orientation Items (M. R. Weiss, Bredemeier, & Shewchuk, 1985)

Sport	
<p>Challenge</p> <ol style="list-style-type: none"> 1. Some players like hard sport skills because they're challenging BUT Other players prefer easy sport skills because they are sure they can do them. 2. Some players like difficult sport skills because they enjoy trying to become good at them BUT Other players don't like to try difficult sport skills. 3. Some players don't like difficult sport skills because they have to work too hard BUT Other players like difficult skills because they find them more challenging. 4. Some players try new sport skills that are more difficult to do BUT Other players would rather stick to sport skills which are pretty easy. 5. Some players like skills that are pretty easy to do BUT Other players like those skills that make them work pretty hard. 	
<hr/>	
Independent Mastery	
<ol style="list-style-type: none"> 1. When some players can't learn a skill right away they want the coach to help them BUT Other players would rather try to figure it out by themselves. 2. When some players make a mistake they would rather figure out the right way by themselves BUT Other players would rather ask the coach how to do it right. 3. If some players get stuck on a skill, they ask the coach for help BUT Other players keep trying to figure out the skill on their own. 4. Some players like to try to figure out how to do sport skills on their own BUT Other players would rather ask the coach how it should be done. 5. Some players like to practice their skills without help BUT Other players like to have the coach help them practice their skills. 	
<hr/>	
Curiosity	
<ol style="list-style-type: none"> 1. Some players work on skills to learn how to do them BUT Other players work on skills because you're supposed to. 2. Some players practice because the coach tells them to BUT Other players practice to find out how good they can become. 3. Some players practice skills because they are interested in the sport BUT Other players practice skills because the coach wants them to. 4. Some players would rather just only learn what they have to in their sport BUT Other players would rather learn as much as they can. 	

Music**Challenge**

1. Some musicians like hard music skills because they're challenging BUT Other musicians prefer easy music skills because they are sure they can do them.
2. Some musicians like difficult music skills because they enjoy trying to become good at them BUT Other musicians don't like to try difficult musicians skills.
3. Some musicians don't like difficult music skills because they have to work too hard BUT Other musicians like difficult skills because they find them more challenging.
4. Some musicians try new music skills that are more difficult to do BUT Other musicians would rather stick to skills which are pretty easy.
5. Some musicians like skills that are pretty easy to do BUT Other musicians like those skills that make them work pretty hard.

Independent Mastery

1. When some musicians can't learn a skill right away they want the teacher to help them BUT Other musicians would rather try to figure it out by themselves.
2. When some musicians make a mistake they would rather figure out the right way by themselves BUT Other musicians would rather ask the teacher how to do it right.
3. If some musicians get stuck on a skill, they ask the teacher for help BUT Other musicians keep trying to figure out the skill on their own.
4. Some musicians like to try to figure out how to do music skills on their own BUT Other musicians would rather ask the teacher how it should be done.
5. Some musicians like to practice their skills without help BUT Other musicians like to have the teacher help them practice their skills.

Curiosity

1. Some musicians work on skills to learn how to do them BUT Other musicians work on skills because you're supposed to.
 2. Some musicians practice because the teacher tells them to BUT Other musicians practice to find out how good they can become.
 3. Some musicians practice skills because they are interested in the instrument BUT Other musicians practice skills because the teacher wants them to.
 4. Some musicians would rather just learn only what they have to in music BUT Other musicians would rather learn as much as they can.
-

Procedure

After approval to conduct the study was obtained from the university's institutional review board (see Appendix B), I conducted a pilot study with six youth, ages 10-15, who were current participants in sport and music. The pilot study was intended to check that items were understandable and to determine the length of time

needed to complete the survey. Participants completed the survey in 20-30 minutes and indicated difficulty understanding one demographic item (“Is this an in-school or out-of-school activity?”). This item was adapted by changing “in-school” to “school-sponsored.”

To recruit participants involved in both sport and music activities, I contacted directors of after-school sport and music programs via email (see Appendix C). A total of 14 youth sport (10) and music (4) programs agreed to participate in the study ($N = 254$ and $N = 112$, respectively). Once I received permission from program directors and coaches/conductors to administer a questionnaire, arrangements were made to (a) distribute parent informational letters and consent forms by sending them home with the child or sending directly to parents via email and (b) administer the survey. The IRB approved a waiver of documentation of parent consent, and 12 of the 14 programs also approved this procedure. For these programs, parents were instructed to read the informational letter and consent form and contact me via phone or email if they did not want their son or daughter to participate (see Appendix D). For the other two programs, parent informational letters and consent forms were distributed and parent signatures were required for their child to participate in the study (see Appendix D).

I administered the survey before, during, or after a practice/rehearsal. A complete copy of the survey can be found in Appendix E. Coaches, conductors, and other adults were requested to leave the survey area. The venue was arranged for maximum privacy in responding to surveys. After obtaining participant assent, I provided precise instructions for how to complete the survey and assured youth that answers would remain confidential. Participants were instructed to complete the portions of the survey for

activities in which they were involved. During data analysis, surveys were screened to identify individuals active in both organized sport and music programs. Only youth who currently participated in both activities comprised the final sample in data analyses.

Design and Data Analysis

The first purpose entailed a multivariate, mixed-model design to compare youths' perceptions of friendship quality in sport and music domains. Domain and gender served as independent variables and dimensions of friendship quality were dependent variables. First, I conducted a confirmatory factor analysis (CFA) to determine if the target structure specified by the SFQS fit the data for sport and music domains. The factor structure included six latent friendship quality dimensions with three to four items per factor. Next, a 2 x 2 (domain by gender) repeated measures multivariate analysis of variance (RM MANOVA) was conducted to compare friendship quality dimensions in sport and music for boys and girls. If the interaction or main effects were significant, follow-up simple effects analyses were conducted to determine which friendship quality dimensions differentiated domains, gender, and/or gender within domain. Effect sizes were determined using Cohen's d for dependent samples when comparing sport and music

$\left(\frac{\frac{Mean_{sport} - Mean_{music}}{SD_{pooled}}}{\sqrt{1-r}} \right)$, and Cohen's d for independent samples when comparing girls

and boys $\left(\frac{Mean_{girls} - Mean_{boys}}{SD_{pooled}} \right)$ (Cohen, 1988). Effect sizes were interpreted as small ($d \geq .20$), medium ($d \geq .50$), or large ($d \geq .80$) (Cohen, 1988).

The second purpose involved a multivariate correlational design to examine relationships among friendship quality dimensions and motivational variables (perceived

competence, enjoyment, anxiety, and motivational orientation). Structural equation modeling (SEM) was used to address this purpose. Three steps guided this analysis: (a) the model was specified based on theoretical hypotheses, (b) the fit of the model to the data was assessed using multiple indices, and (c) parameters were estimated for measurement and structural components (Tabachnick & Fidell, 2007). Separate models were tested for sport and music domains ($N = 366$). The hypothesized structural model can be seen in Figure 3. Gender was examined as a moderator of the relationship between friendship quality and motivational variables by subsequently running analyses for sport boys ($N = 155$), sport girls ($N = 211$), music boys ($N = 155$), and music girls ($N = 211$).

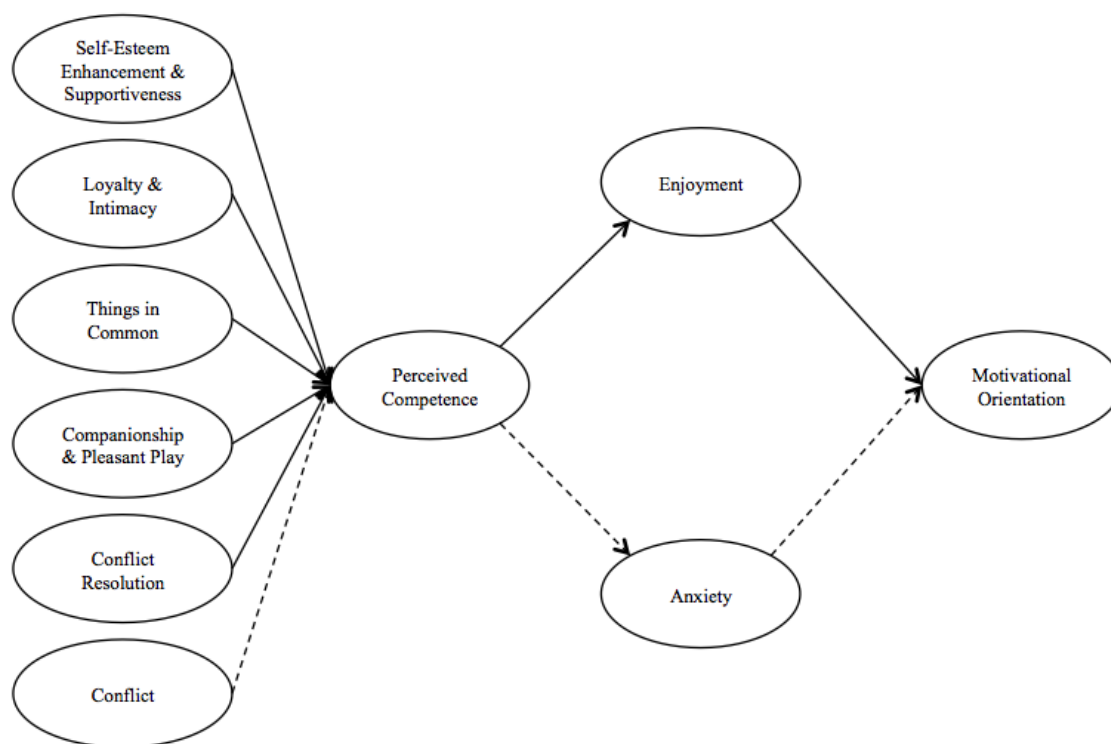


Figure 3. Hypothesized Model of Relationships for Sport and Music Domains.

Note: Dashed lines represent negative relationships. The measurement models for latent variables are not shown for clarity.

Model testing for CFA and SEM analyses was conducted using LISREL 8.8 (Joreskog & Sorbom, 2001). The fit of each model to observed data was tested with multiple fit indices: non-normed fit index (NNFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA). Fit indices $\geq .90$ and RMSEA $\leq .08$ indicate an acceptable model fit, while fit indices $\geq .95$ and RMSEA $\leq .05$ indicate a good model fit (Hu & Bentler, 1999; Ullman, 2007). RMSEA values larger than .10 indicate a poor model fit (Ullman, 2007). Fit indices $\geq .90$ and RMSEA values between .08 and .10 was deemed an adequate model fit. Parameter estimates were considered statistically significant ($p < .05$) with t -values ≥ 1.96 . For SEM analyses, effect size (R^2) was determined by amount of variance explained in the motivation variables by friendship quality and interpreted as small (1-8%), medium (9-24%), or large ($\geq 25\%$) (Cohen, 1988).

CHAPTER 3

RESULTS

This section is organized along the two study purposes: (a) to compare perceived friendship quality in sport and music domains, and (b) to test a model of relationships among friendship quality and competence motivation constructs. First, I present scale reliabilities and correlations among variables, followed by results of the confirmatory factor analysis for friendship quality, domain and gender differences in friendship quality dimensions, and relationships among friendship quality and motivational constructs.

Scale Reliabilities and Correlations

Correlations among study variables, along with means, standard deviations, and range of scores, are displayed in Table 7 (sport) and Table 8 (music). All scales showed acceptable to good internal consistency reliability ($\alpha \geq .70$) and can be seen on the diagonal of each table.

Correlations among sport friendship quality dimensions were moderately-high to high, with the exception of conflict. Sport competence motivation variables were moderately related. Sport independent mastery showed near-zero correlations with challenge and curiosity motivation. Similar to sport, music friendship quality dimensions were moderately to strongly related except for conflict, and competence motivation variables were moderately related. Music independent mastery was also unrelated to challenge and curiosity motivation, thus independent mastery for sport and music was eliminated from further analyses.

Table 7

Correlations among All Variables for Sport ($N = 366$)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Self-Esteem Enhancement and Supportiveness	.79											
2. Loyalty and Intimacy	.62	.75										
3. Things in Common	.47	.62	.79									
4. Companionship and Pleasant Play	.45	.66	.66	.84								
5. Conflict Resolution	.58	.56	.42	.43	.73							
6. Conflict	-.19	.06	-.02	.12	-.14	.91						
7. Perceived Competence	.20	.20	.28	.20	.19	-.01	.74					
8. Enjoyment	.26	.17	.19	.23	.12	-.13	.42	.85				
9. Anxiety	-.05	-.09	-.09	-.08	-.08	.05	-.45	-.28	.91			
10. Challenge	.27	.25	.25	.22	.27	-.01	.55	.31	-.24	.82		
11. Independent Mastery	-.07	-.05	-.04	.05	.02	.06	.11	.01	.02	.07	.80	
12. Curiosity	.26	.21	.20	.23	.26	-.05	.33	.33	-.11	.57	.06	.72
<i>M</i>	4.19	4.04	4.04	4.48	4.04	2.01	3.05	4.75	2.05	3.26	2.47	3.39
<i>SD</i>	0.74	0.81	0.70	0.66	0.82	1.05	0.56	0.48	0.74	0.60	0.78	0.58
Range	1-5	1-5	1-5	1-5	1-5	1-5	1-4	1-5	1-4	1-4	1-4	1-4

Alpha coefficients are reported on the diagonal

Note: $r \geq .10$ significant, $p < .05$.

Table 8

Correlations among All Variables for Music ($N = 366$)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Self-Esteem Enhancement and Supportiveness	.79											
2. Loyalty and Intimacy	.61	.74										
3. Things in Common	.47	.68	.85									
4. Companionship and Pleasant Play	.39	.66	.65	.84								
5. Conflict Resolution	.52	.55	.47	.49	.73							
6. Conflict	-.16	.01	-.01	.06	-.19	.92						
7. Perceived Competence	.26	.14	.20	.17	.13	-.14	.84					
8. Enjoyment	.23	.09	.05	.10	.06	-.13	.56	.97				
9. Anxiety	-.07	-.07	-.12	-.04	-.09	.14	-.34	-.18	.81			
10. Challenge	.21	.11	.08	.14	.12	-.13	.60	.67	-.24	.88		
11. Independent Mastery	-.03	.00	.04	.03	.01	.02	.13	.03	-.04	.09	.84	
12. Curiosity	.21	.14	.09	.11	.10	-.09	.44	.68	-.12	.69	.02	.84
<i>M</i>	3.69	3.91	3.95	4.33	3.95	2.03	2.89	3.82	2.00	2.91	2.63	2.75
<i>SD</i>	0.93	0.86	0.82	0.74	0.85	1.06	0.71	1.19	1.29	0.78	0.80	0.86
Range	1-5	1-5	1-5	1-5	1-5	1-5	1-4	1-5	0-6	1-4	1-4	1-4

Alpha coefficients are reported on the diagonal

Note: $r \geq |.10|$ significant, $p < .05$.

Confirmatory Factor Analysis of SFQS

The CFA for sport data revealed an adequate model fit, NNFI = .95, CFI = .95, RMSEA = .0871 (90% CI [.0805, .0939]), although RMSEA > .08 suggested that model fit could be improved. Modification indices revealed that allowing the measurement errors of loyalty/intimacy items 2 and 18 to correlate would improve the fit of the model. This modification was deemed conceptually justified because these items represent aspects of the same construct. Running the model with this modification revealed an acceptable fit, NNFI = .96, CFI = .96, RMSEA = .0755 (90% CI [.0687, .0825]). Each item loaded only on its respective latent factor, factor loadings were high and significant, and most uniquenesses were small (see Table 9). Factor variables were calculated by averaging the values of items loading on each factor. Factor correlations among the five positive dimensions of friendship quality were moderate to high ($\Phi = .518$ to $.891$, $M = .677$), whereas most correlations among positive dimensions and conflict were low ($\Phi = -.233$ to $.114$).

Table 9

Parameter Estimates for Final Confirmatory Factor Model for Sport (N = 366)

Item	Item Description	Factor Loading	Uniqueness
s1	My friend gives me a second chance to perform a skill	.651*	.576
s8	My friend and I praise each other for doing sports well	.667	.556
s14	After I make mistakes, my friend encourages me	.755	.430
s22	My friend has confidence in me during sports	.744	.446
s2	My friend and I can talk about anything	.585*	.658
s7	My friend and I stick up for each other in sports	.724	.476
s13	My friend looks out for me	.838	.298
s18	My friend and I tell each other secrets	.480	.770
s3	My friend and I have common interests	.741*	.450
s10	My friend and I do similar things	.804	.353
s15	My friend and I have the same values	.619	.617
s19	My friend and I think the same way	.657	.569
s4	My friend and I do fun things	.754*	.432
s9	I like to spend time with my friend	.800	.360
s16	I like to play with my friend	.705	.503
s21	My friend and I spend time together	.801	.358
s5	My friend and I make up easily when we have a fight	.592*	.650
s11	My friend and I try to work things out when we disagree	.847	.283
s17	When we have an argument, my friend and I talk about how to reach a solution	.648	.580
s6	My friend and I get mad at each other	.893*	.202
s12	My friend and I fight	.917	.158
s20	My friend and I have arguments	.831	.309

Note: * indicates the factor loading was set to a value of 1. All factor loadings were significant at $t \geq 1.96$.

Next, the final measurement model for sport friendship quality was used as the target factor structure for music friendship quality. Results revealed an acceptable model fit, NNFI = .96, CFI = .97, RMSEA = .0730 (90% CI [.0661, .0800]). Each item loaded only on its respective latent factor, factor loadings were high and significant, and most uniquenesses were small (see Table 10). Factor correlations among the five positive

friendship quality dimensions were moderate to high ($\Phi = .487$ to $.853$, $M = .692$), whereas most correlations among positive dimensions and conflict were low ($\Phi = -.217$ to $.082$). The final CFA model, identical for sport and music, can be seen in Figure 4.

Table 10

Parameter Estimates for Final Confirmatory Factor Model for Music (N = 366)

Item	Item Description	Factor Loading	Uniqueness
m1	My friend shows me how to correct a mistake	.499*	.751
m8	My friend and I praise each other for playing music well	.744	.446
m14	After I make mistakes, my friend encourages me	.821	.326
m22	My friend has confidence in me during music	.726	.472
m2	My friend and I can talk about anything	.618*	.618
m7	My friend and I stick up for each other in music	.621	.614
m13	My friend looks out for me	.761	.420
m18	My friend and I tell each other secrets	.612	.626
m3	My friend and I have common interests	.828*	.315
m10	My friend and I do similar things	.766	.414
m15	My friend and I have the same values	.704	.504
m19	My friend and I think the same way	.777	.396
m4	My friend and I do fun things	.788*	.378
m9	I like to spend time with my friend	.771	.405
m16	I like to play with my friend	.664	.560
m21	My friend and I spend time together	.799	.361
m5	My friend and I make up easily when we have a fight	.540*	.708
m11	My friend and I try to work things out when we disagree	.755	.430
m17	When we have an argument, my friend and I talk about how to reach a solution	.777	.396
m6	My friend and I get mad at each other	.864*	.254
m12	My friend and I fight	.932	.132
m20	My friend and I have arguments	.872	.240

Note: * indicates the factor loading was set to a value of 1. All factor loadings were significant at $t \geq 1.96$.

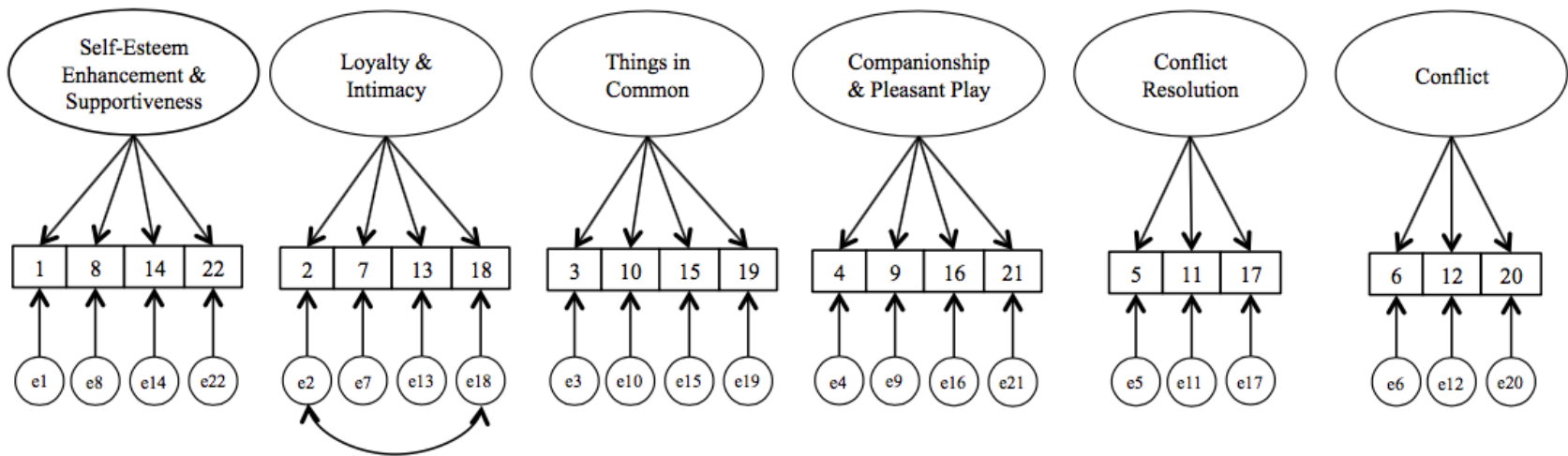


Figure 4. Final CFA Model for Sport and Music Friendship Quality (SFQS)
 Note: Friendship quality factors are specified to be correlated.

Purpose 1: Domain and Gender Differences in Friendship Quality Dimensions

The RM MANOVA revealed a domain by gender interaction, Wilks' $\lambda = .946$, $F(6, 359) = 3.44$, $p = .003$, $\eta^2 = .054$. Simple effects analyses indicated that boys and girls rated their best sport friend higher on self-esteem enhancement and supportiveness than they did for their best music friend. Only boys reported higher values on the other positive friendship qualities for their best sport friend than for their best music friend.

Table 11 displays descriptive statistics and effect sizes for domain and gender.

Table 11

Means (SD) and Effect Sizes for Domain by Gender Interaction on Friendship Quality Dimensions

Friendship Quality Dimension	Boys			Girls		
	Sport	Music	Cohen's <i>d</i>	Sport	Music	Cohen's <i>d</i>
Self-Esteem Enhancement & Supportiveness	4.00 (0.80)	3.38* (0.95)	0.80	4.34 (0.65)	3.92* (0.85)	0.74
Loyalty & Intimacy	3.84 (0.85)	3.51* (.83)	0.54	4.19 (0.73)	4.20 (0.75)	0.02
Things in Common	3.99 (0.70)	3.74 (0.83)	0.40	4.08 (0.70)	4.10 (0.78)	0.03
Companionship & Pleasant Play	4.42 (0.71)	4.05* (0.77)	0.60	4.53 (0.61)	4.53 (0.65)	0.00
Conflict Resolution	3.86 (0.90)	3.63* (0.84)	0.33	4.18 (0.73)	4.17 (0.78)	0.02
Conflict	2.10 (1.11)	2.09 (1.10)	0.01	1.94 (1.01)	1.98 (1.03)	0.06

Note: * denotes a significant difference from sport domain.

Cohen's *d* values are for domain differences within gender (i.e., dependent sample Cohen's *d*).

The domain by gender interaction only explained 5.4% of the variance in friendship quality, whereas the domain main effect was also statistically significant and explained 25% of the variance, Wilks' $\lambda = .751$, $F(6, 359) = 19.83$, $p < .001$, $\eta^2 = .249$.

Thus, this effect was also interpreted. Follow-up ANOVAs and paired *t*-tests showed that participants rated their best sport friends higher on all positive friendship qualities than their best music friends. Table 12 displays descriptive statistics and effect sizes for sport and music domains. The gender main effect was also significant, Wilks' $\lambda = .836$, $F(6, 359) = 11.71$, $p < .001$, $\eta^2 = .164$. Girls rated their best friendships, regardless of domain, as higher on all positive friendship qualities than boys. Effect sizes were small to medium. For the interaction and main effects, there was no difference in perceived friendship conflict by domain or gender.

Table 12

Means (SD) and Effect Sizes for Domain Main Effect on Friendship Quality Dimensions

Friendship Quality Dimension	Sport	Music	Cohen's <i>d</i>
Self-Esteem Enhancement & Supportiveness	4.19 (0.74)	3.69* (0.93)	0.75
Loyalty & Intimacy	4.04 (0.81)	3.91* (0.86)	0.22
Things in Common	4.04 (0.70)	3.94* (0.82)	0.16
Companionship & Pleasant Play	4.48 (0.66)	4.32* (0.74)	0.27
Conflict Resolution	4.04 (0.82)	3.95* (0.85)	0.15
Conflict	2.00 (1.05)	2.03 (1.06)	0.04

Note: * denotes a significant difference from sport domain.

Cohen's *d* values are for domain differences (i.e., dependent sample Cohen's *d*).

Purpose 2: Relationships Between Friendship Quality and Competence Motivation

Variables

Because the CFA revealed moderate to high correlations among the five positive friendship quality factors in both domains, it was deemed appropriate to determine if the inter-factor correlations could be explained by a second-order factor. If so, this would also reduce the number of independent variables and parameters to be estimated in the ensuing SEM analyses. Thus, a higher-order CFA was conducted with the five positive friendship qualities composing first-order factors and positive friendship quality representing the second-order factor.

For sport, the second-order factor model showed an adequate fit to the data, NNFI = .95, CFI = .96, RMSEA = .0979 (90% CI [.0904, .1060]), although RMSEA > .08 suggested room for improvement. The maximum modification index suggested that allowing the errors of Things in Common and Companionship and Pleasant Play to correlate could improve model fit. This modification was considered justifiable because these dimensions represent aspects of the same construct of positive friendship quality. Running the model with this modification showed an improved and adequate fit, NNFI = .96, CFI = .97, RMSEA = .0818 (90% CI [.0740, .0897]). No other theoretically justified modifications were suggested. Factor loadings were high and significant and most uniquenesses were small (see Table 13). Positive friendship quality for sport demonstrated good internal consistency reliability ($\alpha = .92$), was correlated at $r = -.04$ with conflict, and showed a low to moderate relationship with other study variables ($r = -.09$ to $.27$).

For music, the final second-order CFA model for sport friendship quality was used as the target factor structure. The solution showed a non-positive definite psi matrix with a negative variance for Loyalty and Intimacy. As this is problematic, Byrne (1998) suggests setting the variance to a small positive number (e.g., .02) to solve this issue. Thus, the variance for Loyalty and Intimacy was set to .02; running the model with this modification solved the issue and revealed an adequate fit to the data, NNFI = .96, CFI = .96, RMSEA = .0888 (90% CI [.0812, .0966]). No theoretically justified modifications were suggested. Factor loadings were high and significant and most uniquenesses were small (see Table 13). Positive friendship quality for music demonstrated good internal consistency reliability ($\alpha = .92$), was correlated $-.07$ with conflict, and showed a low to moderate relationship to other study variables ($r = -.10$ to $.23$).

Table 13

Parameter Estimates for Final Sport and Music Second-Order Confirmatory Factor Model (N = 366)

Item	Sport		Music	
	Factor Loading	Uniqueness	Factor Loading	Uniqueness
Self-Esteem Enhancement and Supportiveness	.888	.211	.828	.315
Loyalty & Intimacy	.998	.004	.971	.058
Things in Common	.654	.573	.749	.439
Companionship & Pleasant Play	.681	.536	.725	.474
Conflict Resolution	.803	.355	.792	.373

Note: All factor loadings were significant at $t \geq 1.96$.

Based on the second-order CFA, the positive friendship quality factor was used in lieu of the five positive friendship quality dimensions in subsequent SEM analyses testing the model of relationships among friendship quality (positive, negative), perceived

competence, positive and negative affect, and motivational orientation. First, the model was specified based on competence motivation theory (see Figure 5). Second, the model was tested for fit to the observed data. Finally, measurement (factor loadings, uniquenesses) and structural parameters (path coefficients, variance explained) were estimated and interpreted. Separate models were run for sport and music domains.

Because of the large number of parameters to be estimated for the measurement and structural models, two-to-three-item parcels were created for constructs with more than three subscale items, notably perceived competence (5 items) and performance anxiety (5 and 7 items for sport and music, respectively). Parceling items reduces the proportion of estimated parameters to number of data points, allowing for more reliable parameter estimates (Coffman & MacCallum, 2005; Little, Cunningham, Shahar, & Widaman, 2002). Subscale scores were used as observed indicators for positive friendship quality (5 subscales) and motivational orientation (2 subscales). The three items for conflict and the three items for enjoyment were used as indicators for respective latent variables. For each latent variable, a parameter estimate of 1.0 was specified for one observed item to set the metric for the measurement scale (Ullman, 2007). Equations for all created item parcels are shown in Appendix F.

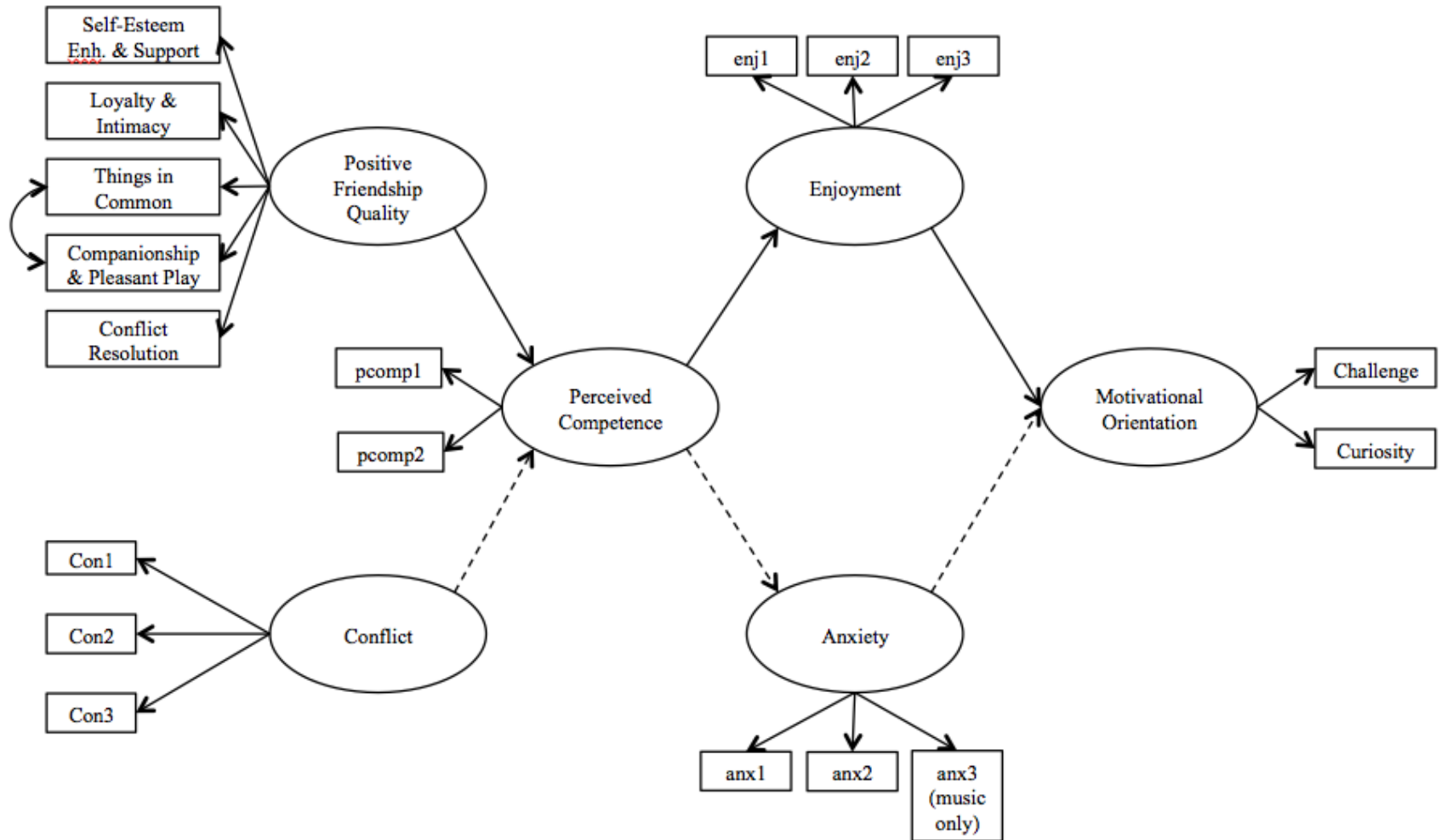


Figure 5. Hypothesized Model of Friendship Quality and Motivational Variables for Sport and Music.

Note: Observed indicators (rectangles) reflect item parcels, subscales, or individual items. Solid lines reflect hypothesized positive relationships; dashed lines reflect hypothesized negative relationships. Correlations among latent variables and error terms are not drawn into the model for clarity.

Sport Model. The model showed an acceptable fit to the data, NNFI = .93, CFI = .94, RMSEA = .0786 (90% CI [.0696, .0877]). Modification indices did not reveal any theoretically justified changes. Thus, this model was retained for interpretation. All factor loadings were significant and are presented in Table 14.

Table 14

Sport Model: Completely Standardized Factor Loadings

Subscale/Parcel/Item	Latent Variable	Factor Loading	Uniqueness
sFR_SEESup	Positive Friendship Quality	.716*	.487
sFR_LoyInt	Positive Friendship Quality	.876	.232
sFR_TC	Positive Friendship Quality	.692	.522
sFR_CPP	Positive Friendship Quality	.715	.488
sFR_CR	Positive Friendship Quality	.660	.565
sCon1	Conflict	.897*	.195
sCon2	Conflict	.915	.163
sCon3	Conflict	.830	.311
sPC1	Perceived Competence	.809*	.345
sPC2	Perceived Competence	.733	.463
sEnj1	Enjoyment	.900*	.189
sEnj2	Enjoyment	.886	.215
sEnj3	Enjoyment	.659	.565
sAnx1	Anxiety	.880*	.226
sAnx2	Anxiety	.946	.105
sChallenge	Motivational Orientation	.810*	.344
sCuriosity	Motivational Orientation	.708	.498

Note: * indicates the parameter estimate was set to a value of 1. All loadings were significant at $t \geq 1.96$.

Several significant paths emerged demonstrating that friendship quality is related to competence motivation constructs (see Table 15 and Figure 6). First, positive friendship quality was directly related to perceived competence, meaning that when athletes rated their best sport friend higher in self-esteem enhancement, loyalty, similar interests, companionship, and conflict resolution, they reported a greater sense of ability

at their sport. Second, positive friendship quality was indirectly related to enjoyment, anxiety, and motivational orientation. Athletes' perceptions of greater positive friendship quality were associated with higher enjoyment, lower performance anxiety, and higher motivation to seek optimally challenging activities. Third, competence motivation constructs were related with each other. Perceived competence was directly related to enjoyment and anxiety and indirectly related to motivational orientation, and enjoyment was positively related and anxiety was negatively related to motivational orientation. The model indicated that friendship quality explained a medium amount of variance in perceived competence (11.2%) and motivational orientation (22.3%) and a large amount of variance in enjoyment (28.8%) and anxiety (27.5%).

Table 15

Sport Model: Path Coefficients for Direct and Indirect Effects

Path	Coefficient	<i>t</i> -value
Direct		
Positive Friendship Quality → Perceived Competence	.32	5.07*
Conflict → Perceived Competence	-.07	-1.11
Perceived Competence → Enjoyment	.54	8.26*
Perceived Competence → Anxiety	-.52	-7.72*
Enjoyment → Motivational Orientation	.40	6.12*
Anxiety → Motivational Orientation	-.16	-2.65*
Indirect		
Positive Friendship Quality → Enjoyment	.18	4.58*
Positive Friendship Quality → Anxiety	-.17	-4.48*
Positive Friendship Quality → Motivational Orientation	.10	4.06*
Conflict → Enjoyment	-.04	-1.11
Conflict → Anxiety	.04	1.11
Conflict → Motivational Orientation	-.02	-1.10
Perceived Competence → Motivational Orientation	.30	6.01*

Note: * Indicates $t \geq |1.96|$.

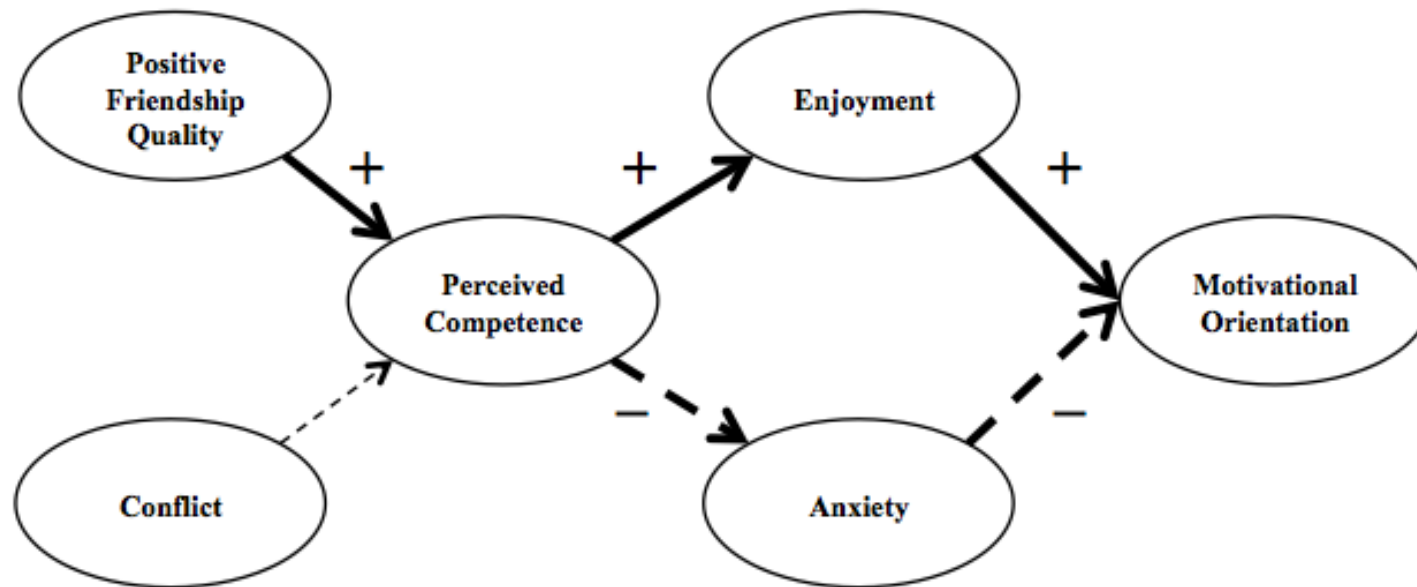


Figure 6. Final Model of Friendship Quality and Motivational Variables for Sport.

Note: The measurement models for latent variables are not shown for clarity. Solid lines reflect hypothesized positive relationships; dashed lines reflect hypothesized negative relationships. Thicker lines indicate a significant path between variables ($p < .05$).

Music Model. The model showed an acceptable fit to the data, NNFI = .97, CFI = .97, RMSEA = .0567 (90% CI [.0476, .0659]). All factor loadings were significant and are presented in Table 16.

Table 16

Music Model: Completely Standardized Factor Loadings

Subscale/Parcel/Item	Latent Variable	Factor Loading	Uniqueness
mFR_SEESup	Positive Friendship Quality	.673*	.547
mFR_LoyInt	Positive Friendship Quality	.895	.198
mFR_TC	Positive Friendship Quality	.747	.443
mFR_CPP	Positive Friendship Quality	.715	.489
mFR_CR	Positive Friendship Quality	.647	.581
mCon1	Conflict	.863*	.255
mCon2	Conflict	.931	.133
mCon3	Conflict	.873	.238
mPC1	Perceived Competence	.845*	.287
mPC2	Perceived Competence	.860	.261
mEnj1	Enjoyment	.965*	.069
mEnj2	Enjoyment	.975	.050
mEnj3	Enjoyment	.926	.142
mAnx1	Anxiety	.802*	.357
mAnx2	Anxiety	.582	.662
mAnx3	Anxiety	.790	.375
mChallenge	Motivational Orientation	.836*	.302
mCuriosity	Motivational Orientation	.824	.322

Note: * indicates the parameter estimate was set to a value of 1. All loadings were significant at $t \geq 1.96$.

Several significant paths emerged (see Table 17 and Figure 7). First, positive friendship quality was positively related and friendship conflict was negatively related to perceived competence. When musicians rated their best music friend higher in supportiveness, loyalty, companionship, similar interests, and conflict resolution, and lower in conflict, they reported greater perceptions of music ability. Second, positive

friendship quality and conflict were indirectly related to enjoyment, anxiety, and motivational orientation. Musicians' perceptions of greater positive friendship quality and less conflict were associated with higher enjoyment, lower performance anxiety, and greater preference for optimally challenging music activities. Third, competence motivation constructs were related with each other. Perceived competence was directly related to enjoyment and anxiety and indirectly related to motivational orientation, and enjoyment was positively related and anxiety was negatively related to motivational orientation. The model indicated that friendship quality explained a small amount of variance in perceived competence (7.5%), a medium amount in anxiety (16.1%), and a large amount in enjoyment (39.1%) and motivational orientation (69.1%).

Table 17

Music Model: Path Coefficients for Direct and Indirect Effects

Path	Coefficient	t-value
Direct		
Positive Friendship Quality → Perceived Competence	.21	3.55*
Conflict → Perceived Competence	-.16	-2.83*
Perceived Competence → Enjoyment	.63	11.63*
Perceived Competence → Anxiety	-.40	-6.25*
Enjoyment → Motivational Orientation	.80	16.52*
Anxiety → Motivational Orientation	-.11	-2.46*
Indirect		
Positive Friendship Quality → Enjoyment	.13	3.47*
Positive Friendship Quality → Anxiety	-.09	-3.14*
Positive Friendship Quality → Motivational Orientation	.12	3.42*
Conflict → Enjoyment	-.10	-2.79*
Conflict → Anxiety	.07	2.61*
Conflict → Motivational Orientation	-.09	-2.77*
Perceived Competence → Motivational Orientation	.54	10.18*

Note: * Indicates $t \geq |1.96|$.

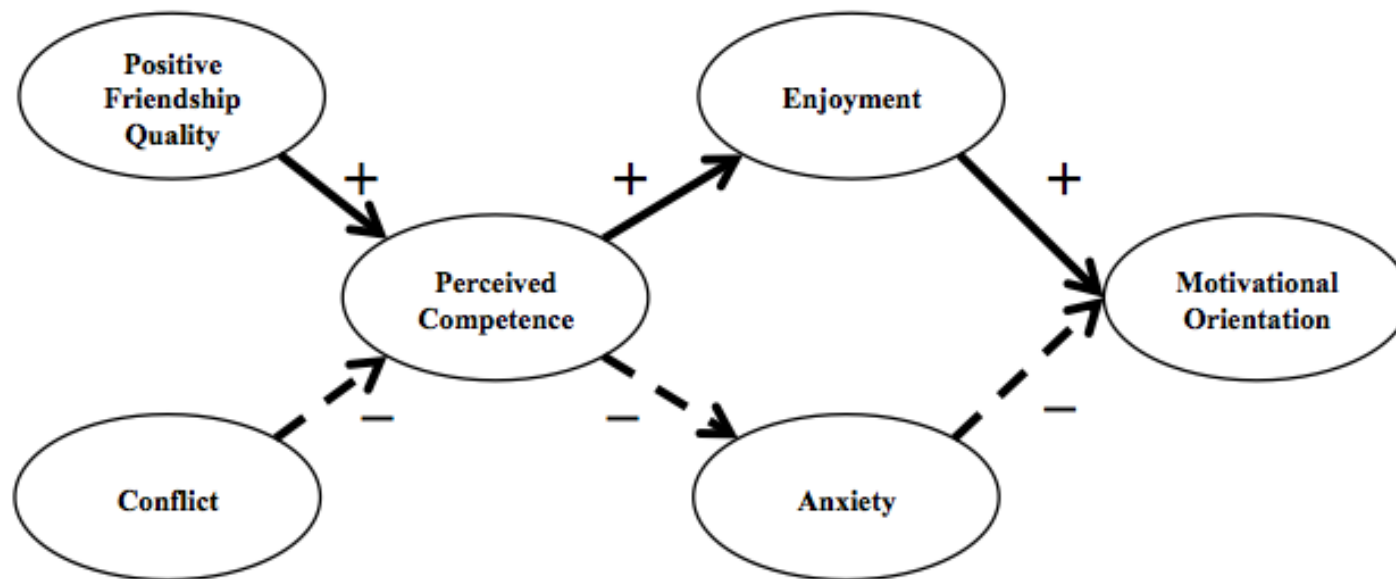


Figure 7. Final Model of Friendship Quality and Motivational Variables for Music.

Note: The measurement models for latent variables are not shown for clarity. Solid lines reflect hypothesized positive relationships; dashed lines reflect hypothesized negative relationships. Thicker lines indicate a significant path between variables ($p < .05$).

Gender as a Moderator of the Relationships Between Friendship Quality and Competence Motivation Variables

Gender was pursued as a moderator in the friendship quality-motivation relationship because previous studies have found gender differences in perceptions of friendship quality and its relationship with perceived competence and motivation during adolescence (see Horn, 2004; M. R. Weiss & Stuntz, 2004). Thus, the target model in Figure 5 was examined separately for gender by domain, resulting in four analyses.

Boys: Sport. The model showed an acceptable fit to the data, NNFI = .93, CFI = .94, RMSEA = .0764 (90% CI [.0606, .0920]). Modification indices did not reveal any theoretically justified changes. All factor loadings were significant (see Appendix G). The model for boys was similar to the model for sport overall (see Table 18 and Figure 8). Specifically, positive friendship quality was directly associated with perceived competence, and indirectly associated with enjoyment, anxiety, and motivational orientation. Male athletes' perceptions of more supportive and loyal best sport friendships were related to greater perceptions of ability, higher enjoyment, lower performance anxiety, and higher motivation for optimally challenging sport skills. Also, competence motivation constructs were related with each other. Perceived competence was directly related to enjoyment and anxiety and indirectly related to motivational orientation; enjoyment was positively related and anxiety was negatively related to motivational orientation. The model indicated that friendship quality explained a medium amount of variance in perceived competence (14.9%) and motivational orientation (23.0%) and a large amount in enjoyment (25.8%) and anxiety (26.3%).

Table 18

Sport Model by Gender: Path Coefficients for Direct and Indirect Effects

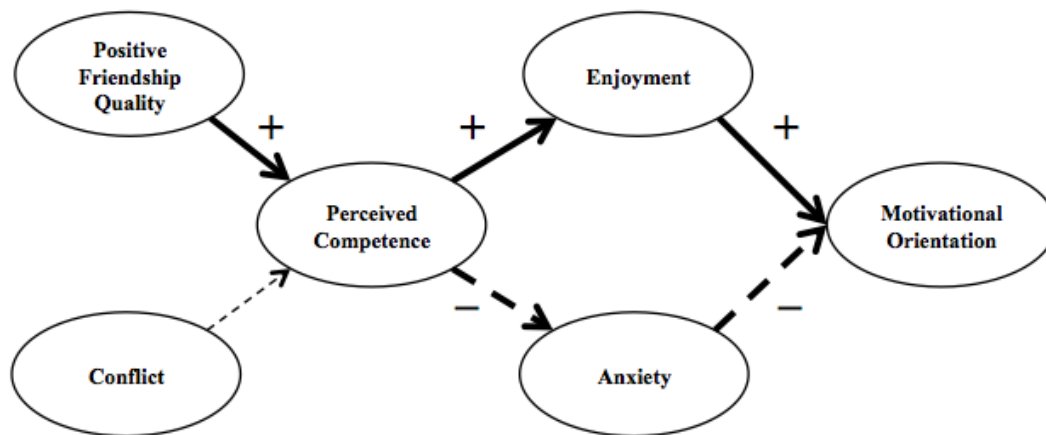
Path	Boys (n = 155)		Girls (n = 211)	
	Coefficient	t-value	Coefficient	t-value
Direct				
Positive Friendship Quality → Perceived Competence	.36	3.71*	.38	4.35*
Conflict → Perceived Competence	-.15	-1.70	-.03	-0.33
Perceived Competence → Enjoyment	.51	5.19*	.56	6.50*
Perceived Competence → Anxiety	-.51	-5.33*	-.52	-6.19*
Enjoyment → Motivational Orientation	.31	3.42*	.44	4.87*
Anxiety → Motivational Orientation	-.29	-3.13*	-.07	-0.82
Indirect				
Positive Friendship Quality → Enjoyment	.19	3.18*	.21	3.93*
Positive Friendship Quality → Anxiety	-.19	-3.21*	-.20	-3.85*
Positive Friendship Quality → Motivational Orientation	.11	2.94*	.11	3.16*
Conflict → Enjoyment	-.08	-1.63	-.01	-0.33
Conflict → Anxiety	.08	1.64	.01	0.33
Conflict → Motivational Orientation	-.05	-1.60	-.01	-0.33
Perceived Competence → Motivational Orientation	.31	4.30*	.28	4.13*

Note: * Indicates $t \geq |1.96|$.

Girls: Sport. The solution showed a non-positive definite theta-epsilon matrix with a negative variance for the Anxiety2 parcel. The variance for Anxiety2 was set to .02, consistent with Byrne's (1998) suggestion; running the model with this modification solved the issue and revealed an adequate fit to the data, NNFI = .92, CFI = .93, RMSEA = .0826 (90% CI [.0702, .0951]). Modification indices did not reveal any theoretically justified changes. All factor loadings were significant (see Appendix G). The model for girls was similar to the overall sport model and boys' model, but distinct from those models based on a non-significant path between anxiety and motivational orientation (see

Table 18 and Figure 8). Specifically, positive friendship quality was directly related to perceived competence, and indirectly related to enjoyment, anxiety, and motivational orientation. When female athletes rated their best sport friend as supportive and having things in common, they reported higher beliefs about their sport ability, higher enjoyment, less performance anxiety, and higher motivation to learn challenging sport skills. Also, competence motivation constructs were related with each other. Perceived competence was directly related to enjoyment and anxiety and indirectly related to motivational orientation, and enjoyment was positively related to motivational orientation. The model indicated that friendship quality explained a medium amount of variance in perceived competence (14.6%) and motivational orientation (22.2%) and a large amount in enjoyment (31.0%) and anxiety (26.2%).

Boys:



Girls:

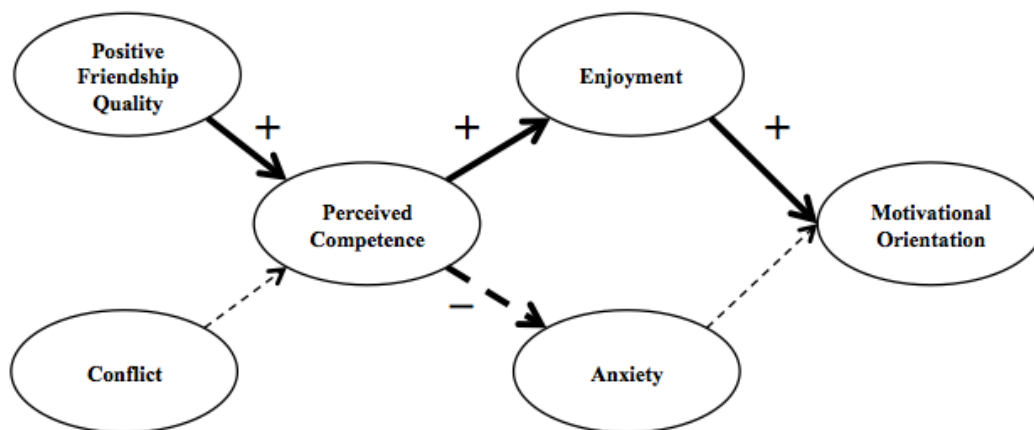


Figure 8. Model of Friendship Quality and Motivational Variables for Sport Boys (top) and Girls (bottom). *Note:* The measurement models for latent variables are not shown for clarity. Solid lines reflect hypothesized positive relationships; dashed lines reflect hypothesized negative relationships. Thicker lines indicate a significant path between variables ($p < .05$).

Boys: Music. The model showed an acceptable fit to the data, NNFI = .96, CFI = .97, RMSEA = .0556 (90% CI [.0377, .0719]). All factor loadings were significant (see Appendix G). The model for boys was similar to the overall model but did not contain one significant path—anxiety to motivational orientation (see Table 19 and Figure 9). Specifically, positive friendship quality and conflict were related to perceived competence, and indirectly related to enjoyment, anxiety, and motivational orientation. Male musicians' perceptions of best friendships high in positive qualities and low in conflict were associated with higher beliefs about music ability, higher enjoyment, lower performance anxiety, and higher motivation to seek optimally challenging activities. Also, competence motivation constructs were related with each other. Perceived competence was directly related to enjoyment and anxiety and indirectly related to motivational orientation, and enjoyment was positively related to motivational orientation. The model indicated that friendship quality explained a medium amount of variance in perceived competence (12.2%) and anxiety (17.5%) and a large amount of variance in enjoyment (41.5%) and motivational orientation (70.3%).

Table 19

Music Model by Gender: Path Coefficients for Direct and Indirect Effects

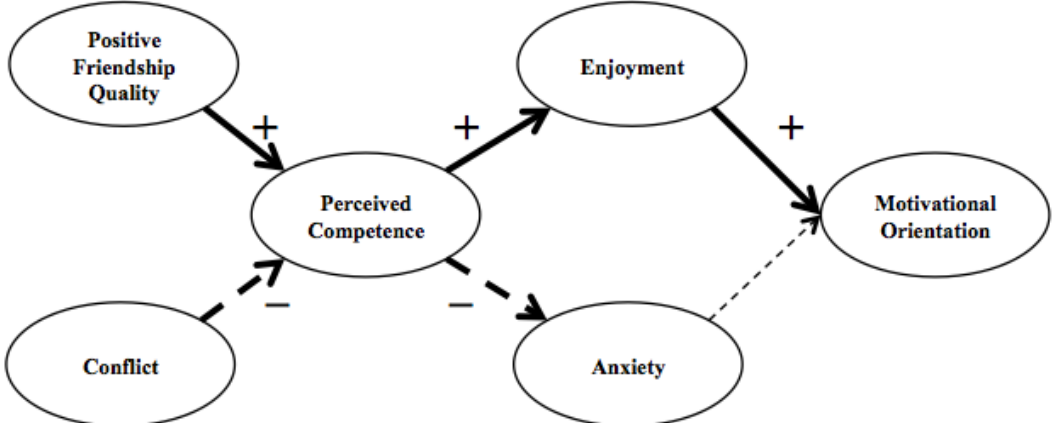
Path	Boys (n = 155)		Girls (n = 211)	
	Coefficient	t-value	Coefficient	t-value
Direct				
Positive Friendship Quality → Perceived Competence	.29	2.99*	.24	3.02*
Conflict → Perceived Competence	-.20	-2.29*	-.14	-1.80
Perceived Competence → Enjoyment	.64	7.91*	.61	8.52*
Perceived Competence → Anxiety	-.42	-4.15*	-.40	-4.82*
Enjoyment → Motivational Orientation	.82	11.72*	.77	11.66*
Anxiety → Motivational Orientation	-.05	-0.71	-.16	-2.55*
Indirect				
Positive Friendship Quality → Enjoyment	.19	2.89*	.15	2.92*
Positive Friendship Quality → Anxiety	-.12	-2.48*	-.10	-2.62*
Positive Friendship Quality → Motivational Orientation	.16	2.82*	.13	2.88*
Conflict → Enjoyment	-.13	-2.25*	-.08	-1.78
Conflict → Anxiety	.08	2.04*	.05	1.70
Conflict → Motivational Orientation	-.11	-2.21*	-.07	-1.77
Perceived Competence → Motivational Orientation	.55	6.78*	.53	7.55*

Note: * Indicates $t \geq |1.96|$.

Girls: Music. The model showed an acceptable fit to the data, NNFI = .96, CFI = .97, RMSEA = .0617 (90% CI [.0486, .0744]). All factor loadings were significant (see Appendix G). Compared to the overall and boys' music models, the model for girls did not reveal significant relationships for conflict with perceived competence, enjoyment, anxiety, and motivational orientation or a significant relationship between anxiety and motivational orientation (see Table 19 and Figure 9). Specifically, positive friendship quality was directly related to perceived competence, and indirectly related to enjoyment,

anxiety, and motivational orientation. Female musicians' perceptions of more supportive and loyal best music friendships were related to higher perceptions of ability, higher enjoyment, lower performance anxiety, and higher motivation for optimally challenging music skills. Competence motivation constructs were also related with each other. Perceived competence was directly related to enjoyment and anxiety and indirectly related to motivational orientation, and enjoyment was positively related and anxiety was negatively related to motivational orientation. The model indicated that friendship quality explained a small amount of variance in perceived competence (8.0%), a medium amount of variance in anxiety (16.0%) and a large amount of variance in enjoyment (36.9%) and motivational orientation (67.7%).

Boys:



Girls:

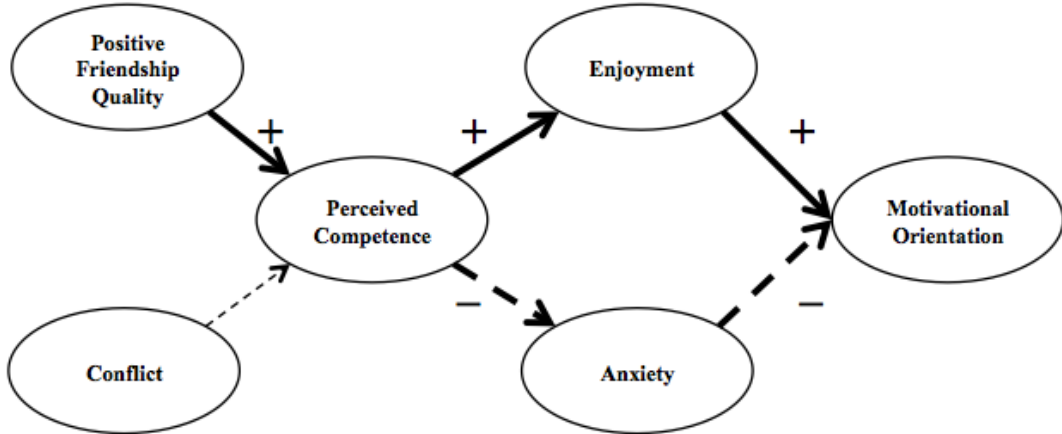


Figure 9. Model of Friendship Quality and Motivational Variables for Music Boys (top) and Girls (bottom).
Note: Observed indicators (rectangles) reflect item parcels, subscales, or individual items. Solid lines reflect hypothesized positive relationships; dashed lines reflect hypothesized negative relationships. Thicker lines indicate a significant path between variables ($p < .05$).

CHAPTER 4

DISCUSSION

Extracurricular activities, such as sport and music, are popular and important contexts for promoting positive peer relationships and developmental outcomes in youth (Child Trends, 2012, 2013; Fredricks & Simpkins, 2013; A. L. Smith, 2007; Weiss & Stuntz, 2004). Children and adolescents consistently cite being with friends, making new friends, and being part of a group as reasons to join and maintain involvement in sport and music, thus emphasizing the social significance of peer relationships for motivated behaviors in these activities (e.g., Kokotsaki & Hallam, 2007; M. R. Weiss & Amorose, 2008). While separate literatures have reinforced the importance of peer relationships in sport and music, little research has compared whether conceptions of friendship vary between these two activities. The present study sought to extend past research by: (a) directly comparing perceived friendship quality in sport and music domains by using a purposeful sample of adolescents who were currently involved in both activities, and (b) using appropriate theories to guide research questions and analytic methods that go beyond description to explain relationships between friendship quality and motivational constructs.

The first purpose was to compare youths' perceptions of friendship quality in sport and music domains among early adolescents involved in both activities. This purpose was based on Sullivan's (1953) interpersonal theory of psychiatry, which states that different types of peer relationships are important at particular stages of development. Specifically, the theory identifies peer group acceptance as most important

for middle childhood and close friendships as especially important during late childhood and early adolescence. Close friendships are thought to provide consensual validation of youths' self-worth. Zarbatany and colleagues (1990, 1992) also suggest that the nature of friendships and their role in psychosocial development should be considered within specific activity contexts. Present study findings revealed domain-specific patterns in friendship quality: adolescents rated their best sport friendships higher in self-esteem enhancement and supportiveness, loyalty and intimacy, things in common, companionship and pleasant play, and conflict resolution than their best music friendships, but did not differ in ratings of conflict. Self-esteem enhancement and supportiveness contributed most to domain differences, indicating that best sport friends were viewed as particularly more supportive and encouraging than best music friends. It should be noted that differences in self-esteem enhancement and supportiveness were meaningfully significant as denoted by a medium effect size, but the other friendship quality dimensions recorded low effect sizes.

Findings are consistent with the few studies that found context-specific variations in friendship expectations and qualities, especially for self-esteem enhancement and supportiveness. Poulin and Denault (2013) found that perceived quality of friendships within a team sport context were more supportive than perceptions of friendships in school clubs, prosocial activities, or artistic activities. Zarbatany and colleagues (1992) found that early adolescents expected different behaviors from friends depending on context. For example, friends in a competitive context (i.e., sport) were expected to provide ego-reinforcement, whereas friendship expectations for listening to music and academic activities entailed having common interests and helping each other,

respectively. Findings extend these studies by showing that multiple dimensions of friendship quality distinguish best sport and music friendships among youth involved in both activities. Interestingly, though, no domain differences emerged for perceived conflict between best sport and music friends. While sport and music provide opportunities for cooperation and interdependence, they are also settings where individual and group conflicts might arise (Hallam, 2010; M. R. Weiss & Smith, 1999, 2002; M. R. Weiss et al., 1996; A. L. Smith et al., 2006).

Drawing upon theory and research, higher positive friendship qualities for best sport friends than for best music friends might be explained in several ways. The focus of team sports on developing camaraderie, team spirit, and cooperation has been suggested as a reason for high levels of support among friends in sport contexts (Poulin & Denault, 2013; M. R. Weiss & Stuntz, 2004). There is also likely a greater sense of interdependency in competitive sport than for music contexts. In sport, the actions of each team member affect the entire team in terms of executing plays, running offensive and defensive tactics, and contributing to team success. In music, the actions of one individual may be masked by the performance of the rest of the ensemble. For example, a less skilled individual may play softer or not at all during difficult lines of music, but this is not noticeable when listening to the ensemble. As a result, greater interdependency may allow more supportive friendships to develop in sport than in music contexts.

Another possible explanation is that there are more occasions for peer interactions in sport practices and competitions (e.g., on the bench, during warm-ups, water breaks, etc.) than there are in music rehearsals and performances. In music, adolescents normally practice their instrument individually and during ensemble rehearsals and

performances—when in the company of peers—adolescents are expected to remain focused on the task as directed by their conductor. In addition, music friends who are in the same ensemble but do not play the same instrument are usually required to sit away from one another during rehearsals and performances, limiting opportunities for interactions.

Finally, participants reported more seasons of participation in sport ($M = 7.26$) than concerts played ($M = 5.53$). Athletes usually participate in 1-2 seasons per year, while musicians play 3-4 concerts per year, meaning that these youth likely had participated in sport for more years (4-7 years) than music (1-2 years). Also, 90% of participants reported that their sport participation was an out-of-school activity, while 92% of youth played an instrument in a school-sponsored ensemble. It is possible that longer duration of involvement and participating in out-of-school contexts facilitated the development of stronger and more supportive sport friendships. In addition, music participation may have been an elective or required activity for adolescents—depending on school requirements—while sport is most often a voluntary activity. Whether the activity was required or an elective for participants could influence their dedication to the activity and also be a possible factor explaining domain differences in friendship quality, as participation in an elective activity may enable greater dedication and stronger friendship development. The present study also used a purposeful sample of adolescents involved in both sport and music activities. This sample may be distinct in certain qualities that enable them to participate in both activities (e.g., social skills, socio-economic status) compared to adolescents who participate in either sport or music.

Domain differences in friendship quality were also distinct for boys and girls. Boys rated their best sport friendships higher on all dimensions of positive friendship quality than music friends, while girls only reported differences between best sport and music friendships on self-esteem enhancement and supportiveness. Findings for boys may be explained by the reasons listed above (greater comradeship and interdependency, more opportunities for social interaction, more sport experience). Another possible explanation points to the cultural stereotype of sport as a masculine activity (Coakley, 2004; Fredricks & Eccles, 2005), Meanwhile, music has been cast as a neutral or feminine activity (e.g., Eccles et al., 1993; Phillips & Weiss, in press). Boys may develop stronger and more supportive friendships in an activity congruent with society's expectations of masculinity.

Gender differences in friendship quality partially support hypotheses and previous research. Findings for self-esteem enhancement and supportiveness, loyalty and intimacy, and things in common are consistent with studies that show girls perceive their friendships to be more intimate and self-disclosing than boys in school and performance contexts (Parker & Asher, 1993; A. L. Smith et al., 2006; M. R. Weiss & Smith, 2002). In addition, girls rated their friendships higher in companionship and pleasant play and conflict resolution than boys. These findings are inconsistent with past research on sport friendships, where girls and boys did not differ on these dimensions (M. R. Weiss & Smith, 2002; M. R. Weiss et al., 1996). Despite gender differences, means on positive friendship qualities for both boys and girls were high (> 3.75 on a 5-point scale) in sport and music. Finally, no gender differences emerged for conflict, which is contrary to findings by M. R. Weiss and Smith (2002) where boys rated their sport friendships higher

in conflict. This non-significant finding may have been due to the high quality of friendships reported by girls and boys in both activities (i.e., high means for positive dimensions and low means for conflict).

The second study purpose examined the relationship between perceptions of friendship quality and motivational variables in sport and music. This purpose was grounded in Harter's (1978, 1981) competence motivation theory that identifies reinforcement, modeling, and support from peers and adults as contributors to youths' domain-specific ability beliefs, affective responses, and motivational orientations and behaviors. Model testing of the relationships among perceived friendship quality—as the source of social influence—and competence motivation constructs supported theoretical hypotheses that positive friendship quality is a source of competence beliefs, enjoyment, anxiety, and motivational beliefs and behaviors in both sport and music.

Findings are consistent with research in sport and music domains, where having a supportive and loyal friend was related to more adaptive outcomes such as self-determined and intrinsic motivation, self-worth, and physical activity behavior (e.g., Kipp & Weiss, 2013; McDonough & Crocker, 2005; Patrick et al., 1999; A. L. Smith, 1999; M. R. Weiss & Smith, 2002). A. L. Smith and colleagues (2006) found that early adolescents with friendships reflected by higher positive and lower negative qualities were positively related to sport ability beliefs, enjoyment, and self-determined motivation and negatively related to anxiety. Adderley and colleagues (2003) and Kennedy (2002) reported that friendships developed in music activities influenced youths' sustained involvement and motivation. Current study findings extend these studies by showing that the positive dimensions of friendship quality are associated with competence motivation

constructs in multiple performance domains. Having a best friend in both sport and music who was more praising, loyal, supportive, and similar in interests; played well together; and made up easily after an argument contributed to adolescents' ability beliefs, affective responses, and preference for challenging activities.

Findings for perceived conflict in friendships were different for sport and music. In music, higher ratings for arguing with one's best friend were negatively related to perceived competence, enjoyment, and motivational orientation and positively related to performance anxiety. This relationship, however, did not emerge for sport. Some researchers have found that higher levels of sport friendship conflict were related to lower levels of competence motivation constructs including self-perceptions, enjoyment, and motivational orientation (A. L. Smith et al., 2006), while others did not find such an association (McDonough & Crocker, 2005; M. R. Weiss & Smith, 2002). Drawing upon theory and research, a possible explanation is offered for disparate findings for friendship conflict in music and sport. Conflict and competition are characteristic of the culture in youth sport (Gould, 1993; Scanlan, 1996), whereas conflict and tension are less prominent in the youth music culture. In middle school music ensembles, performances are non-competitive and there is greater emphasis on skill development, with less focus on being 'first chair' or section leader. Thus, while absolute scores for conflict were low, when musicians perceive their friendship as higher in conflict, this may be seen as uncharacteristic for that activity and have a negative impact on competence motivation.

As part of purpose two, gender was explored as a moderator of the relationship between friendship quality and competence motivation because previous studies have found gender differences in perceived friendship quality and its relationship with

motivational constructs during adolescence (e.g., Horn, 2004; M. R. Weiss & Stuntz, 2004). In the sport domain, boys and girls displayed similar relationships between positive and negative friendship quality and competence motivation constructs. Perceptions of one's best sport friend as higher in supportiveness, loyalty, and companionship were related to positive ability beliefs, affective responses, and motivational orientations. Previous research has found some gender differences in the relationship between peer relationships and motivational beliefs and behaviors in sport, where higher ratings of close friendship were associated with higher physical activity levels for girls but not boys (A. L. Smith, 1999), but others have not examined gender differences in this relationship (A. L. Smith et al., 2006; M. R. Weiss & Smith, 2002). Girls and boys did differ, however, in the relationship between anxiety and motivational orientation in sport. Worry about playing well was negatively associated with motivational orientation for boys but not for girls. A possible explanation for these findings includes gender-norm and socialization differences for boys and girls in sport (Brustad & Weiss, 1987; Coakley, 2004; Fredricks & Eccles, 2005). Findings are consistent with previous research, as Brustad and Weiss (1987) found that higher levels of competitive trait anxiety were related to lower self-esteem for boys but not girls.

Gender also emerged as a moderator in the music domain. For boys, perceptions of their best friend as high in loyalty and supportiveness *and* low in conflict were significantly related to competence motivation variables. For girls, only perception of a best friend as high in positive friendship qualities was associated with perceived competence, positive and negative affect, and motivational orientation. Studies have found preliminary evidence for gender differences in the relationship between social

influences and motivational outcomes in music. Patrick and colleagues (1999) noted that girls were more likely than boys to indicate that peer relationships influenced their enjoyment and commitment (positively and negatively) to performance activities. The finding that anxiety was associated with motivational orientation for girls but not boys in the present study supports research that has reported higher music performance anxiety levels in girls than boys (Osborne & Kenny, 2005; C. Ryan, 2004) and that girls may be more susceptible to negative effects of music performance anxiety (Kenny & Osborne, 2006; Papageorgi, Hallam, & Welch, 2007). A possible explanation for this difference is the gender-role stereotype of music as a feminine activity (Eccles et al., 1993; Phillips & Weiss, in press). Results from the present study extend previous research by showing the pattern of relationships in friendship quality and motivation differ slightly for male and female athletes and musicians. However, the majority of relationships among friendship quality and competence motivation variables for boys and girls in sport and music were similar.

In sum, the purposes of the present study were guided by theory to examine friendship quality in sport and music. This study extends the knowledge base by revealing domain and gender similarities and differences in friendship quality and motivational variables. Theory-driven research questions facilitated explanations for emergent relationships. Among adolescents who participate in both activities, findings indicate that youths' best friendships in sport and music activities vary in perceived supportiveness and self-esteem enhancement, but are strongly related to their experiences and beliefs in both activities.

Theoretical Implications

The present study was guided by theory and, in turn, findings provide support for the interpersonal theory of psychiatry (Sullivan, 1953) and competence motivation theory (Harter, 1978, 1981). Furman (1993, 1996) has lamented the lack of theory in friendship research and advocated for researchers to use theoretical frameworks to explain empirical findings relevant to peer relationships and developmental outcomes. In this section, I discuss how findings support the guiding theoretical frameworks of this study and extend the knowledge base on context-specific adolescent friendships in multiple performance domains.

The first purpose of the present study was to compare youths' perceptions of friendship quality in sport and music domains and was guided by the interpersonal theory of psychiatry (Sullivan, 1953). Sullivan (1953) suggested that positive peer relationships are psychologically adaptive for youth and that different types of peer relationships (e.g., peer acceptance, close friendships) are important at distinct developmental periods due to specific interpersonal needs. The developmental nature of peer relationships suggests that close friendships are especially important during late childhood and early adolescence because of the need for interpersonal intimacy. Support for Sullivan's (1953) interpersonal theory of psychiatry was demonstrated through adolescents rating the quality of their best sport and music friendships highly ($M > 3.75$ on a 5-point scale for positive dimensions and $M = 2$ for conflict). Adolescent athletes and musicians perceived their best sport and music friends as loyal, intimate, and self-esteem enhancing companions, thus supporting Sullivan's (1953) contentions of the significance of close, intimate peer relationships during early adolescence.

The present study's second purpose—to determine how friendship quality is related to motivational variables in sport and music—was based on Harter's (1978, 1981) competence motivation theory. According to competence motivation theory, reinforcement from peers and adults can increase or decrease perceptions of competence and control, affective responses, and motivational orientations and behaviors in a particular achievement domain. Friendship quality was specifically chosen as the source of social influence due to its importance during early adolescence and the context-specific nature of peer relationships. Findings that friendship quality and motivational beliefs and behaviors were strongly related are consistent with competence motivation theory. In both domains, positive dimensions of friendship quality were directly associated with perceived competence and indirectly associated with enjoyment, anxiety, and motivational orientation. Findings support hypothesized relationships within competence motivation theory and are consistent with research showing relationships between positive friendship quality and other peer constructs with motivational beliefs and behaviors (e.g., A. L. Smith et al., 2006; Ullrich-French & Smith, 2006, 2009; M. R. Weiss & Smith, 2002). The present findings highlight friendship quality as an important source of social influence—explaining a medium to large amount of variance in competence motivation variables in sport and music.

Findings that competence beliefs, positive and negative affect, and motivational orientation were strongly related also supports competence motivation theory. This study adds to the robust body of literature supporting the links among perceived competence, affect, and motivation beliefs and behaviors in the physical activity domain (e.g., Ebbeck, 1994; Scanlan & Lewthwaite, 1986; Scanlan et al., 1989; M. R. Weiss, Bredemeier, &

Shewchuk, 1986; M. R. Weiss & Phillips, 2015). Brustad (1993, 1996) and A. L. Smith (1999) found that beliefs about physical ability were positively related to enjoyment of physical activity and others found that enjoyment and anxiety were related to motivational orientation (Brustad, 1988; Duncan, 1993; A. L. Smith, 1999). Study findings demonstrate the utility of competence motivation theory in cross-domain research, as relationships specified in the theory hold true in multiple performance domains.

The model of relationships based on competence motivation theory specified that perceived competence was the only direct predictor of enjoyment and anxiety. Other studies have found multiple sources of enjoyment and stress, including perceived competence, effort and mastery, friendship quality, social opportunities, positive team interactions, and positive coach support (Scanlan, Carpenter, Lobel, & Simons, 1993; Scanlan & Lewthwaite, 1986; Scanlan, Stein, & Ravizza, 1989, 1991; M. R. Weiss & Smith, 2002). While hypothesized relationships within competence motivation theory were supported in sport and music, additional research suggests the model of relationships between social factors and motivational beliefs and behaviors is more complex and should be further examined.

In sum, the present study provides support for the interpersonal theory of psychiatry and competence motivation theory in multiple performance domains. Results reinforce the importance of theory-driven research in cross-domain research, as findings can be explained relative to theoretical concepts and relationships.

Practical Implications

Based on emergent relationships in the present study, it is apparent that perceived friendship quality is strongly associated with ability beliefs, positive and negative affect, and motivation to develop and demonstrate competence in sport and music activities. Adult leaders (coaches, teachers, conductors) in sport and music domains can create opportunities for positive interactions among co-participants in these activities, such as team-building activities outside of practice/rehearsal and partner activities during practice/rehearsal. Thus, coaches, teachers, and conductors can create an environment to help develop positive relationships among teammates and ensemble members, which can influence youths' motivational beliefs and behaviors in sport and music.

In addition, competence motivation variables were strongly related to each other. Therefore, significant others (coaches, teachers, parents, and peers) can also positively affect intrinsic motivation by behaving in ways to enhance perceived competence and enjoyment and reducing anxiety in sport and music activities. This can be achieved by promoting skill development, emphasizing effort and skill mastery rather than intra-group competition, and providing contingent positive feedback and reinforcement for performing skills well.

Conceptions of friendship quality were slightly different for girls and boys in sport and music domains. While absolute values were still high, best music friends were rated as lower in self-esteem enhancement and supportiveness, loyalty and intimacy, things in common, companionship and pleasant play, and conflict resolution than sport friendships; this was especially true for male musicians. Music teachers and conductors can create opportunities for more social interactions among participants before, during, or

after rehearsals. This could include scheduling more out-of-school performances, social and ensemble spirit events (e.g., holiday party, room decorating), and group practice opportunities. These strategies can enhance friendship quality and ultimately influence motivational beliefs and behaviors.

Study Limitations and Future Research Directions

The present study expanded knowledge about friendship quality and motivational variables in sport and music domains among adolescents involved in both activities. Some limitations, however, should be noted. First, the present study assessed friendship quality through youths' perceptions of their relationship with their best friend. It is possible that different results may have emerged with alternative measurement strategies (e.g., social networks, observations) or with a different definition of friendship (e.g., reciprocated dyadic relationship, group cohesion). In addition, even though the confirmatory factor analysis established validity of the SFQS for music friendships, it is possible that other qualities of music friendships not measured by the SFQS may be relevant to youth. Future studies might include qualitative methods to determine if additional friendship qualities exist specific to the music domain.

Second, dimensions of positive friendship quality were moderately to highly correlated and formed a higher-order factor. This suggests that best friendships in sport and music contain multiple overlapping positive features rather than only a few. While the five dimensions are conceptually distinct and the multidimensional nature of friendship quality is supported by previous research (e.g., M. R. Weiss & Smith, 1999, 2002; M. R. Weiss et al., 1996), there was empirical overlap in these constructs. Other

research has also found empirical overlap in youths' perceptions of friendship features (e.g., Cox & Ullrich-French, 2010; Kipp & Weiss, 2013; Ullrich-French & Smith, 2006), suggesting that characterization of best friendships are defined by highly related dimensions. Future research should continue to examine both the conceptual and empirical distinctiveness of friendship quality dimensions in context-specific friendships.

Third, the study design was cross-sectional. Athletes' and musicians' perceptions of friendship quality and motivational variables were assessed at the same time point. Thus, results reflect associations between friendship quality and motivational variables in the two domains, not causal relationships. Longitudinal and experimental studies are needed to determine the effects of friendship quality on perceived competence, enjoyment, anxiety, and motivational orientation in sport and music. Also, given that best friends might fluctuate over time, studies could be designed to examine stability of domain-specific friendships over time and its effect on developmental outcomes.

Fourth, other types of peer experiences might complement friendship quality in explaining motivation in different performance domains. Rubin et al. (2006) categorized levels of peer experiences as peer interactions, peer relationships, and peer groups. The present study focused on one specific type of peer relationships—domain-specific best friendships. Including acceptance from one's peer group (activity-specific and non-activity peers) or other peer relationships may provide additional information about aspects of peer experiences that influence motivation in sport and music. Future studies should examine multiple types of peer experiences to provide a more inclusive view of peer influence on motivation in performance domains.

Fifth, friendship quality explained 22% of variance in sport motivational orientation but 69% of variance in music motivational orientation. Thus, there remained a large amount of unexplained variance in both domains, especially sport. One explanation for this discrepancy is that the magnitude of the path between enjoyment and motivational orientation in music was large (.80) while the same path in sport was .40. Other types and sources of social influence, such as coaches, parents, or peer groups, could also account for the unexplained variance in motivational orientation in sport and music. Future research might consider (a) including multiple sources of social influence (e.g., parents and friendship quality) as predictors of sport and music motivation, and (b) examining sources of music enjoyment to explain the empirical overlap with motivational orientation.

Sixth, conflict emerged as significant in the overall music model and boys' music model, but not in the other models for sport and music. Domain differences in these relationships were explained based on distinct competitive norms in sport and music activities, but intra-ensemble/team dynamics and in-school or out-of-school contexts should also be considered when examining the role of conflict in these two activities. For example, in-school activity participants may spend more time with their best sport or music friend throughout the school day, not just during the activity or free time. Future research might continue to examine the relationship between conflict and motivational beliefs in multiple domains and consider other factors such as intra-team dynamics, competitive patterns, and in-school vs. out-of-school contexts in the role of conflict.

Finally, the quantitative approach utilized in the present study extended past research by testing a theory-driven model and estimating the magnitude of relationships

among friendship quality, perceived competence, enjoyment, anxiety, and motivational orientation. However, the survey approach did not enable youth to clarify, elaborate, or provide examples of how their best sport and music friendships might differ. In future studies, a mixed-methods approach that allows participants a voice in explaining their conceptions of friendships in multiple performance domains would complement the quantitative-only perspective. For example, participants could be asked to provide specific examples of domain-specific friendship differences.

Conclusion

In conclusion, the present study provided support for the interpersonal theory of psychiatry and competence motivation theory as a means of understanding and explaining the importance of adolescent friendships in two popular performance domains. Since consideration of context is essential when examining peer relationships and friendships (e.g., Phillips & Weiss, in press; A.L. Smith, 2007; Zarbatany et al., 1992), the present investigation of youths' experiences across sport and music contexts revealed insight about the unique qualities of these performance domains. Cross-context research on the motivational salience of friendships has primarily relied on descriptive findings. This study extended past research on context-specific and cross-domain friendships by explicitly incorporating theoretical frameworks, and findings indicated that youths' best friendships in sport and music were strongly related to their experiences and beliefs in both activities. Having supportive and loyal friends in sport and music was related to ability beliefs, affective responses, and motivational orientation for athletes and musicians. High-quality friendships in sport and music activities can help ensure that

adolescents achieve positive developmental outcomes through sustained involvement in both activities.

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Appendix A

Sport and Music Activities

Sport	N	Percentage	Musical Instrument	N	Percentage
Baseball	14	3.8	Baritone	9	2.5
Basketball	47	12.9	Bass	5	1.4
Cheerleading	2	.5	Bass Clarinet	1	.3
Climbing	2	.5	Bassoon	2	.5
Cross Country	2	.5	Cello	11	3.0
Dance	5	1.4	Clarinet	47	12.8
Figure Skating	2	.5	Flute	36	9.8
Football	11	3.0	French Horn	10	2.7
Golf	1	.3	Guitar	1	.3
Gymnastics	4	1.1	Oboe	1	.3
Hockey	13	3.6	Percussion	22	6.0
Karate	5	1.4	Piano	13	3.6
Lacrosse	12	3.3	Saxophone	40	10.9
Sailing	1	.3	Trombone	22	6.0
Skiing	2	.5	Trumpet	50	13.7
Soccer	159	43.4	Tuba	2	.5
Softball	11	3.0	Viola	9	2.5
Swimming	16	4.4	Violin	33	9.0
Tennis	8	2.2	Voice	52	14.2
Track and Field	13	3.6			
Volleyball	36	9.8			
Total	366	100.0	Total	366	100.0

Appendix B

Institutional Review Board Approval

UNIVERSITY OF MINNESOTA

*Twin Cities Campus**Human Research Protection Program
Office of the Vice President for Research**D528 Mayo Memorial Building
420 Delaware Street S.E.
MMC 820
Minneapolis, MN 55455
Office: 612-626-5654
Fax: 612-626-6061
E-mail: irb@umn.edu or ibc@umn.edu
Website: <http://research.umn.edu/subjects/>*

January 7, 2015

Alison C. Phillips

RE: "Experiences in Sport and Music"
IRB Code Number: **1410P54821**

Dear Ms. Phillips:

The Institutional Review Board (IRB) received your response to its stipulations. Since this information satisfies the federal criteria for approval at 45CFR46.111 and the requirements set by the IRB, final approval for the project is noted in our files. Upon receipt of this letter, you may begin your research.

IRB approval of this study includes the information letter, assent form and recruitment materials received October 20, 2014.

As a reminder, please submit a change in protocol request form for each new site which agrees to participate in the research.

The IRB determined that children could be included in this research under 45CFR46.404; research not involving greater than minimal risk.

The IRB would like to stress that subjects who go through the consent process are considered enrolled participants and are counted toward the total number of subjects, even if they have no further participation in the study. Please keep this in mind when calculating the number of subjects you request. This study is currently approved for 400 subjects. If you desire an increase in the number of approved subjects, you will need to make a formal request to the IRB.

For your records and for grant certification purposes, the approval date for the referenced project is November 13, 2014 and the Assurance of Compliance number is FWA00000312 (Fairview Health Systems Research FWA00000325, Gillette Children's Specialty Healthcare FWA00004003). Research projects are subject to continuing review and renewal; approval will expire one year from that date. You will receive a report form two months before the expiration date. If you would like us to send certification of approval to a funding agency, please tell us the name and address of your contact person at the agency.

As Principal Investigator of this project, you are required by federal regulations to:

Driven to DiscoverSM

- *Inform the IRB of any proposed changes in your research that will affect human subjects, changes should not be initiated until written IRB approval is received.
- *Report to the IRB subject complaints and unanticipated problems involving risks to subjects or others as they occur.
- *Inform the IRB immediately of results of inspections by any external regulatory agency (i.e. FDA).
- *Respond to notices for continuing review prior to the study's expiration date.
- *Cooperate with post-approval monitoring activities.

Information on the IRB process is available in the form of a guide for researchers entitled, What Every Researcher Needs to Know, found at <http://www.research.umn.edu/irb/WERNK/index.cfm>

The IRB wishes you success with this research. If you have questions, please call the IRB office at 612-626-5654.

Sincerely,

Clinton Dietrich, MA
Research Compliance Supervisor
CD/bw

CC: Maureen Weiss

Appendix C

Coach/Conductor/Director Letter

Email Scripts for Coaches, Conductors, and Program Directors

Dear Program Director,

My name is Alison Phillips. I am a graduate student in the School of Kinesiology at the University of Minnesota studying with Dr. Maureen R. Weiss as my advisor. I am writing to seek your cooperation for having participants in your sport/music program participate in my dissertation study.

As a former college athlete and musician, I am interested adolescents' thoughts and feelings about their experiences in sport and music. Specifically, the goal of my project is to understand adolescents' conceptions of friendships in sport and music.

I am requesting that athletes and musicians who are in grades 5-8 complete a questionnaire before, during a break, or after one rehearsal or practice, whichever is more convenient for you, your staff, and the participants in the program. I am aware of the many time demands and activities that take place during sport and music seasons. So, I want to ensure that your program participants' involvement is as brief as possible. Your participants will need no more than 30 minutes to complete the questionnaire. No names will be used on the questionnaires to ensure anonymity and confidentiality of each participant's responses. Results from the questionnaire will be reported for the entire sample, no for specific programs or individuals.

Your cooperation in this project is sincerely appreciated. Would it be possible to talk to you further about your interest and willingness to participate in this project? If you are not the correct person to contact regarding this request would you be willing to direct me toward the correct individual within your program? If I don't hear from you in the next week, I will follow up to find out your interest in having your sport/music program participate in my dissertation study.

Thank you for your consideration and I look forward to hearing from you soon.

Sincerely,

Alison C. Phillips, M.S.
Graduate Student,
School of Kinesiology
(847) 899-3618
phil0792@umn.edu

Maureen R. Weiss, Ph.D.
Professor, School of
Kinesiology
(612) 625-4155
mrweiss@umn.edu

Appendix D

Parent Letters, Consent Forms, and Assent Form

Letter to Parents with Waiver of Documentation of Consent

Dear Parents,

My name is Alison Phillips. I am a graduate student in the School of Kinesiology at the University of Minnesota studying with Dr. Maureen R. Weiss as my advisor. I am writing to seek your cooperation for my dissertation study. The coordinator of the sport/music program has permitted me to conduct my dissertation study with your child's program.

I am interested in the experiences of adolescents in a variety of extracurricular activities. The goal of my project is to understand adolescents' thoughts and feelings about their experiences in common activities. Specifically, I am interested in the factors that influence adolescents' involvement in sport and music.

To address these topics, I will ask your son or daughter to complete a questionnaire within an allocated time before, during, or after one rehearsal or practice in their program. I am aware of the many time demands that your child has during this sport/music activity. So, I want to ensure that your child's involvement is as brief as possible. Your child will need about 30 minutes to complete the questionnaire. **No names will be used on the questionnaire, ensuring anonymity and confidentiality of your child's responses.**

Your cooperation in this project is sincerely appreciated. The information gathered through this project will help parents, teachers, and coaches understand the factors that influence participation in sport and music activities.

Enclosed with this letter is a parent information form. **Please read it and, if you have any questions, do not want your son or daughter to participate, or wish to contact me or my advisor, feel free to do so.** Thank you for your consideration.

Sincerely,

Alison C. Phillips, M.S.
Graduate Student
Kinesiology
(847) 899-3618
phil0792@umn.edu

Maureen R. Weiss, Ph.D.
Professor, School of
Kinesiology
(612) 625-4155
mrweiss@umn.edu

Parent Consent Form with Waiver of Documentation of Consent

Parents' Informational Form
University of Minnesota
Project Title: Experiences in Sport and Music

Your child is invited to be in a research study about his/her experiences in a variety of common activities during adolescence. Your child was selected because he or she is enrolled in a sport or music program permitted to partake in this study. We ask that you read this form and ask any questions you may have. This study is being conducted by researchers in the School of Kinesiology at the University of Minnesota.

Background Information:

The purpose of this study is to understand the thoughts and feelings involvement in sport and/or music activities.

Procedures:

During an allocated time before, during, or after one rehearsal or practice of the activity, your child will answer a questionnaire asking them about their participation in sport and music. Your child will spend about 30 minutes completing the questionnaire.

Risks and Benefits of Being in the Study:

There are no direct risks to your child for completing the questions. There may be a minor risk of discomfort caused by sharing personal thoughts and experiences about participating in sport or music. There are no direct benefits to your child for participating in this study. The study should help us understand how to improve the experiences of children involved in sport and music.

Compensation:

Your child will receive no compensation for participating in the study.

Confidentiality:

The information that your child gives in the study will be handled anonymously and confidentially. Your child's information will not be on the completed questionnaire and there will be no link between your child's name and his/her completed questionnaire. Your child's name will not be used in any report. Only the primary researchers have access to your child's answers.

Voluntary Nature of the Study:

Your child's participation in this study is completely voluntary. Your decision whether or not to participate will not affect your or your child's current or future relations with the University of Minnesota. If you decide to allow your child to participate, they are free to not answer any question or withdraw at any time without affecting those relationships.

Right to withdraw from the study:

Your child may stop answering questions at any time. There is no penalty for doing so. Your child will be told to give their blank survey to Alison who will dispose of it immediately. You may also withdraw your permission at any time by contacting Alison Phillips or Dr. Maureen Weiss (phone numbers are below).

How to withdraw from the study:

If your child wants to discontinue completing the questionnaire they should stop writing and sit quietly until the remainder of the students have finished. You may withdraw your permission at any time by contacting Alison Phillips or Dr. Maureen Weiss. There is no penalty for withdrawing from the study.

Contacts and Questions:

The researchers conducting this study are Alison Phillips and Dr. Maureen Weiss. You may ask any questions you have now. If you have questions later, you are encouraged to contact the researchers:

Alison C. Phillips, Ph.D. Candidate, School of Kinesiology
210 Cooke Hall, 1900 University Ave SE
Minneapolis, MN 55455
Telephone: (847) 899-3618
Email: phil0792@umn.edu

Dr. Maureen R. Weiss, School of Kinesiology
203A Cooke Hall, 1900 University Ave SE
Minneapolis, MN 55455
Telephone: (612) 625-4155
Email: mrweiss@umn.edu

Letter to Parents without Waiver of Documentation of Consent

Dear Parents,

My name is Alison Phillips. I am a graduate student in the School of Kinesiology at the University of Minnesota studying with Dr. Maureen R. Weiss as my advisor. I am writing to seek your cooperation for my dissertation study. The coordinator of the sport/music program has permitted me to conduct my dissertation study with your child's program.

I am interested in the experiences of adolescents in a variety of extracurricular activities. The goal of my project is to understand adolescents' thoughts and feelings about their experiences in common activities. Specifically, I am interested in the factors that influence adolescents' involvement in music and sport.

To address these topics, I will ask your son or daughter to complete a questionnaire within an allocated time before, during, or after one rehearsal or practice in their program. I am aware of the many time demands that your child has. So, I want to ensure that your child's involvement is as brief as possible. Your child will need no more than 30 minutes to complete the questionnaire. **No names will be used on the questionnaire, ensuring anonymity and confidentiality of your child's responses.**

Your cooperation in this project is sincerely appreciated. The information gathered through this project will help parents, teachers, and coaches understand the factors that influence participation in music and sport activities.

Enclosed with this letter is a parent consent form. Please read and sign on the last page if you allow your child to take part in the study. I will collect parent permission forms when your child completes the questionnaire. If you have any questions or wish to contact my advisor or me, please feel free to do so. Thank you for your consideration.

Sincerely,

Alison C. Phillips, M.S.
Ph.D. Candidate
Kinesiology
(847) 899-3618
phil0792@umn.edu

Maureen R. Weiss, Ph.D.
Professor, School of
Kinesiology
(612) 625-4155
mrweiss@umn.edu

Parent Consent Form without Waiver of Documentation of Consent

Informed Consent Agreement
University of Minnesota
Project Title: Experiences in Sport and Music

Your child is invited to be in a research study about his/her experiences in a variety of common activities during adolescence. Your child was selected because he or she is enrolled in a sport or music program permitted to partake in this study. We ask that you read this form and ask any questions you may have. This study is being conducted by researchers in the School of Kinesiology at the University of Minnesota.

Background Information:

The purpose of this study is to understand the thoughts and feelings involvement in music and/or sport activities.

Procedures:

During an allocated time before, during, or after one rehearsal or practice of the activity, your child will answer a questionnaire asking them about their participation in sport and music. Your child will spend about 30 minutes completing the questionnaire.

Risks and Benefits of Being in the Study:

There are no direct risks to your child for completing the questions. There may be a minor risk of discomfort caused by sharing personal thoughts and experiences about participating in sport or music. There are no direct benefits to your child for participating in this study. The study should help us understand how to improve the experiences of children involved in sport and music.

Compensation:

Your child will receive no compensation for participating in the study.

Confidentiality:

The information that your child gives in the study will be handled anonymously and confidentially. Your child's information will not be on the completed questionnaire and there will be no link between your child's name and his/her completed questionnaire. Your child's name will not be used in any report. Only the primary researchers have access to your child's answers.

Voluntary Nature of the Study:

Your child's participation in this study is completely voluntary. Your decision whether or not to participate will not affect your or your child's current or future relations with the University of Minnesota. If you decide to allow your child to participate, they are free to not answer any question or withdraw at any time with out affecting those relationships.

Right to withdraw from the study:

Your child may stop answering questions at any time. There is no penalty for doing so. Your child will be told to give their blank survey to Alison who will dispose of it immediately. You may also withdraw your permission at any time by contacting Alison Phillips or Dr. Maureen Weiss (phone numbers are below).

How to withdraw from the study:

If your child wants to discontinue completing the questionnaire they should stop writing and sit quietly until the remainder of the students have finished. You may withdraw your permission at any time by contacting Alison Phillips or Dr. Maureen Weiss. There is no penalty for withdrawing from the study.

Contacts and Questions:

The researchers conducting this study are Alison Phillips and Dr. Maureen Weiss. You may ask any questions you have now. If you have questions later, you are encouraged to contact the researchers:

Alison C. Phillips, Ph.D. Candidate
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Dr. Maureen R. Weiss
School of Kinesiology
1900 University Ave SE
Minneapolis, MN 55455
Telephone: (612) 625-4155
Email: mrweiss@umn.edu

Statement of Consent:

I have read the above information. I have asked questions and received answers. I consent for my child to participate in the study.

Your child's name: _____

Parent Signature: _____ **Date:** _____

Signature of Investigator: _____ **Date:** _____

Assent Agreement: Students' Form
University of Minnesota
Project Title: Experiences in Sport and Music

We are inviting you to participate in this study because we are trying to learn about teenagers' experiences in different activities. We are interested in your thoughts and feelings about your participation in sport and music. We hope to gain a better understanding of why adolescents participate in these activities.

If you agree to be in this study, we will ask you to fill out a survey. You will answer questions about your experiences in sport and music. The survey should take about 30 minutes to complete.

If you change your mind during the study and do not want to continue, you can stop at any time. Being in this study is your choice, and no one will be upset with you if you don't want to do it.

You can ask any questions that you may have about this study. If you have a question later that you didn't think of now, you can ask us later.

Signing here means that you have read this paper and that you are willing to be in this study. If you don't want to be in this study, don't sign. Remember, being in this study is your decision, and no one will be upset with you if you don't sign or even if you change your mind later.

Print Name _____

Signature _____ Date: _____

Signature of person _____ Date: _____
explaining study

Appendix E

Survey



UNIVERSITY OF MINNESOTA SURVEY



2015





These items have to do with you, a person you consider to be your best friend in sport, and the sport you play or do together. We would like you to think about this sport as you answer the questions below.

My best friend in sport is (first name only): _____

The sport we play together is: _____

		What I Am Like					
Really True for Me	Sort of True for Me	Sample Item:		Sort of True for Me	Really True for Me		
		Some teenagers like dogs better than cats.	BUT	Other teenagers like cats better than dogs.			
		Some teenagers do very well at this sport	BUT	Other teenagers don't feel they are very good when it comes to this sport.			
		Some players like hard sport skills because they're challenging	BUT	Other players prefer easy sport skills because they are sure they can do them.			
		When some players can't learn a skill right away they want the coach to help them	BUT	Other players would rather try to figure it out by themselves.			
		Some players work on sport skills to learn how to do them	BUT	Other players work on skills because you're supposed to.			
		Some teenagers think they could do well at just about any new skill for this sport	BUT	Other teenagers are afraid they might not do well at a new skill for this sport.			
		Some players like difficult sport skills because they enjoy trying to become good at them	BUT	Other players don't like to try difficult sport skills.			
		When some players make a mistake they would rather figure out the right way by themselves	BUT	Other players would rather ask the coach how to do it right.			
		Some players practice because the coach tells them to	BUT	Other players practice to find out how good they can become.			
		Some teenagers feel they are better than others their age at this sport	BUT	Other kids don't feel they can play this sport as well.			
		Some players don't like difficult sport skills because they have to work too hard	BUT	Other players like difficult skills because they find them more challenging.			
		If some players get stuck on a skill, they ask the coach for help	BUT	Other players keep trying to figure out the skill on their own.			

PLEASE CONTINUE WITH THE SURVEY ON THE NEXT PAGE



Really True for Me	Sort of True for Me		BUT		Sort of True for Me	Really True for Me
		Some players practice skills because they are interested in the sport		Other players practice skills because the coach wants them to.		
		Some teenagers don't do well at new sport skills		Other teenagers are good at new sport skills right away.		
		Some players try new sport skills that are more difficult to do		Other players would rather stick to sport skills which are pretty easy		
		Some players like to try to figure out how to do sport skills on their own		Other players would rather ask the coach how it should be done.		
		Some players would rather just only learn what they have to in their sport		Other players would rather learn as much as they can.		
		Some teenagers do not feel they are very skilled at this sport		Other teenagers feel that they are skilled at this sport.		
		Some players like skills that are pretty easy to do		Other players like those skills that make them work pretty hard.		
		Some players like to practice their skills without help		Other players like to have the coach help them practice their skills.		



Friendship in Sports



The items below have to do with you and a person you consider to be your best friend in sport. We would like you to think about this friend as you answer the questions. The questions are about what you and your friend in sports may do or say with each other. Think of your best friend in sport. Write that person's name below.

My best friend in sport is (first name only) (same person as previous page): _____

The sport I play with my best sport friend is (same sport as previous page): _____

Circle the response below each statement that best indicates how you feel about you and your best friend in sport.

- My friend gives me a second chance to perform a skill

Not at all true	A little true	Somewhat true	Pretty true	Really true
-----------------	---------------	---------------	-------------	-------------
- My friend and I can talk about anything

Not at all true	A little true	Somewhat true	Pretty true	Really true
-----------------	---------------	---------------	-------------	-------------
- My friend and I have common interests

Not at all true	A little true	Somewhat true	Pretty true	Really true
-----------------	---------------	---------------	-------------	-------------

PLEASE CONTINUE WITH THE SURVEY ON THE NEXT PAGE



4. My friend and I do fun things	Not at all true	A little true	Somewhat true	Pretty true	Really true
5. My friend and I make up easily when we have a fight	Not at all true	A little true	Somewhat true	Pretty true	Really true
6. My friend and I get mad at each other	Not at all true	A little true	Somewhat true	Pretty true	Really true
7. My friend and I stick up for each other in sports	Not at all true	A little true	Somewhat true	Pretty true	Really true
8. My friend and I praise each other for doing sports well	Not at all true	A little true	Somewhat true	Pretty true	Really true
9. I like to spend time with my friend	Not at all true	A little true	Somewhat true	Pretty true	Really true
10. My friend and I do similar things	Not at all true	A little true	Somewhat true	Pretty true	Really true
11. My friend and I try to work things out when we disagree	Not at all true	A little true	Somewhat true	Pretty true	Really true
12. My friend and I fight	Not at all true	A little true	Somewhat true	Pretty true	Really true
13. My friend looks out for me	Not at all true	A little true	Somewhat true	Pretty true	Really true
14. After I make mistakes, my friend encourages me	Not at all true	A little true	Somewhat true	Pretty true	Really true
15. My friend and I have the same values	Not at all true	A little true	Somewhat true	Pretty true	Really true
16. I like to play with my friend	Not at all true	A little true	Somewhat true	Pretty true	Really true
17. When we have an argument, my friend and I talk about how to reach a solution	Not at all true	A little true	Somewhat true	Pretty true	Really true
18. My friend and I tell each other secrets	Not at all true	A little true	Somewhat true	Pretty true	Really true
19. My friend and I think the same way	Not at all true	A little true	Somewhat true	Pretty true	Really true

PLEASE CONTINUE WITH THE SURVEY ON THE NEXT PAGE



20. My friend and I have arguments	Not at all true	A little true	Somewhat true	Pretty true	Really true
21. My friend and I spend time together	Not at all true	A little true	Somewhat true	Pretty true	Really true
22. My friend has confidence in me during sports	Not at all true	A little true	Somewhat true	Pretty true	Really true

REACTIONS TO PLAYING SPORTS

Many athletes get tense or nervous before or during games, meets, or matches. This happens even to pro athletes. Please read each question. Then circle the response that says how you USUALLY feel before or while you compete in sports. There are no right or wrong answers. Please be as truthful as you can.

The sport I play with my best sport friend is (*same sport as previous page*): _____

Is this sport school-sponsored or an out-of-school activity (please circle)? School-sponsored Out-of-school

How many seasons of this sport have you played? _____

Before or while I compete in the sport written above:

1. I worry that I won't play well.	Not At All	A Little Bit	Pretty Much	Very Much
2. I worry that I will let others down.	Not At All	A Little Bit	Pretty Much	Very Much
3. I worry that I will not play my best.	Not At All	A Little Bit	Pretty Much	Very Much
4. I worry that I will mess up during the game.	Not At All	A Little Bit	Pretty Much	Very Much
5. I worry that I will play very badly.	Not At All	A Little Bit	Pretty Much	Very Much

We are interested in your opinions about participating in **the sport written above**. Circle the response that best represents your opinion. Please answer as honestly as possible.

1. How much do you enjoy playing this sport?	Not at all	A little bit	Somewhat	Pretty much	Very much
2. How much do you like playing this sport?	Not at all	A little bit	Somewhat	Pretty much	Very much
3. How much fun is playing this sport for you?	Not at all	A little bit	Somewhat	Pretty much	Very much

PLEASE CONTINUE WITH THE SURVEY ON THE NEXT PAGE





If you **currently** play an instrument, complete this section as well



6

These items have to do with you, a person you consider to be your best friend in music, and the instrument you play in the ensemble with them. We would like you to think about this instrument as you answer the questions below.

If you are involved in CHOIR, respond to questions by thinking of your voice as your musical instrument.

My best friend in music is (first name only): _____

The instrument I play in the ensemble with my best music friend is: _____

Please complete these items like you did on pages 2 and 3. For each question, first decide whether you are more like the teenagers on the left side or more like the teenagers on the right side. Go to that side and then mark whether that statement is “sort of” or “really true” for you. **You should only have one box checked for each question on the entire line.**

What I Am Like						
Really True for Me	Sort of True for Me		BUT		Sort of True for Me	Really True for Me
<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers do very well at playing this musical instrument		Other teenagers don't feel they are very good when it comes to playing this instrument.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some musicians like hard music skills because they're challenging		Other musicians prefer easy music skills because they are sure they can do them.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	When some musicians can't learn a skill right away they want the teacher to help them		Other musicians would rather try to figure it out by themselves.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some musicians work on skills to learn how to do them		Other musicians work on skills because you're supposed to.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers think they could do well at just about any new skill on this instrument		Other teenagers are afraid they might not do well at a new skill on this instrument.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some musicians like difficult music skills because they enjoy trying to become good at them		Other musicians don't like to try difficult music skills.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	When some musicians make a mistake they would rather figure out the right way by themselves		Other musicians would rather ask the teacher how to do it right.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some musicians practice because the teacher tells them to		Other musicians practice to find out how good they can become.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel they are better than others their age at playing this musical instrument		Other kids don't feel they can play this musical instrument as well.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Some musicians don't like difficult music skills because they have to work too hard		Other musicians like difficult skills because they find them more challenging.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	If some musicians get stuck on a skill, they ask the teacher for help		Other musicians keep trying to figure out the skill on their own.	<input type="checkbox"/>	<input type="checkbox"/>

PLEASE CONTINUE WITH THE SURVEY ON THE NEXT PAGE



Really True for Me	Sort of True for Me		BUT		Sort of True for Me	Really True for Me
		Some musicians practice skills because they are interested in the instrument		Other musicians practice skills because the teacher wants them to.		
		Some teenagers don't do well at new skills on this instrument		Other teenagers are good at new skills on this instrument right away.		
		Some musicians try new music skills that are more difficult to do		Other musicians would rather stick to music skills which are pretty easy		
		Some musicians like to try to figure out how to do music skills on their own		Other musicians would rather ask the teacher how it should be done.		
		Some musicians would rather just only learn what they have to in music		Other musicians would rather learn as much as they can.		
		Some teenagers do not feel they are very skilled at playing this musical instrument		Other teenagers feel that they are skilled at playing this musical instrument.		
		Some musicians like skills that are pretty easy to do		Other musicians like those skills that make them work pretty hard.		
		Some musicians like to practice their skills without help		Other musicians like to have the teacher help them practice their skills.		



Friendship in Music



The items below have to do with you and a person you consider to be your best friend in music. We would like you to think about this friend as you answer the questions. The questions are about what you and your friend in music may do or say with each other. Think of your best friend in music. Write that person's name below.

My best friend in music is (first name only) *(same person as previous page)*: _____

The instrument I play in the ensemble with my best music friend is: _____ *(same instrument as previous page)*

Circle the response below each statement that best indicates how you feel about you and your best friend in music.

- My friend shows me how to correct a mistake.

Not at all true	A little true	Somewhat true	Pretty true	Really true
-----------------	---------------	---------------	-------------	-------------
- My friend and I can talk about anything

Not at all true	A little true	Somewhat true	Pretty true	Really true
-----------------	---------------	---------------	-------------	-------------
- My friend and I have common interests

Not at all true	A little true	Somewhat true	Pretty true	Really true
-----------------	---------------	---------------	-------------	-------------

PLEASE CONTINUE WITH THE SURVEY ON THE NEXT PAGE



4. My friend and I do fun things	Not at all true	A little true	Somewhat true	Pretty true	Really true
5. My friend and I make up easily when we have a fight.	Not at all true	A little true	Somewhat true	Pretty true	Really true
6. My friend and I get mad at each other	Not at all true	A little true	Somewhat true	Pretty true	Really true
7. My friend and I stick up for each other in music	Not at all true	A little true	Somewhat true	Pretty true	Really true
8. My friend and I praise each other for playing music well	Not at all true	A little true	Somewhat true	Pretty true	Really true
9. I like to spend time with my friend	Not at all true	A little true	Somewhat true	Pretty true	Really true
10. My friend and I do similar things	Not at all true	A little true	Somewhat true	Pretty true	Really true
11. My friend and I try to work things out when we disagree	Not at all true	A little true	Somewhat true	Pretty true	Really true
12. My friend and I fight	Not at all true	A little true	Somewhat true	Pretty true	Really true
13. My friend looks out for me	Not at all true	A little true	Somewhat true	Pretty true	Really true
14. After I make mistakes, my friend encourages me	Not at all true	A little true	Somewhat true	Pretty true	Really true
15. My friend and I have the same values	Not at all true	A little true	Somewhat true	Pretty true	Really true
16. I like to play with my friend	Not at all true	A little true	Somewhat true	Pretty true	Really true
17. When we have an argument, my friend and I talk about how to reach a solution	Not at all true	A little true	Somewhat true	Pretty true	Really true
18. My friend and I tell each other secrets	Not at all true	A little true	Somewhat true	Pretty true	Really true
19. My friend and I think the same way	Not at all true	A little true	Somewhat true	Pretty true	Really true

PLEASE CONTINUE WITH THE SURVEY ON THE NEXT PAGE



20. My friend and I have arguments	Not at all true	A little true	Somewhat true	Pretty true	Really true
21. My friend and I spend time together	Not at all true	A little true	Somewhat true	Pretty true	Really true
22. My friend has confidence in me during music	Not at all true	A little true	Somewhat true	Pretty true	Really true

WHAT I THINK ABOUT MUSIC AND PERFORMING

Please think about your musical experience and the instrument you identify below. Answer the questions by circling the number which describes how you feel.

The instrument I play in the ensemble with my best music friend is: _____ (*same instrument as previous page*)

Is this ensemble school-sponsored or an out-of-school activity (please circle)? School-sponsored Out-of-school

How many concerts have you played in with this ensemble? _____

We would like you to think about the instrument written above as you answer the questions.

	Not at all		1	2	3	4	5	6
1. I often worry about my ability to perform.	0		1	2	3	4	5	6
2. When I perform in front of an audience, I find it hard to concentrate on my music.	0		1	2	3	4	5	6
3. When I perform in front of an audience, I usually panic.	0		1	2	3	4	5	6
4. When I finish performing, I usually feel happy with my performance.	0		1	2	3	4	5	6
5. Just before I perform, I feel nervous.	0		1	2	3	4	5	6
6. When I perform in front of an audience, I am afraid of making mistakes.	0		1	2	3	4	5	6
7. I worry that my parents or teacher might not like my performance.	0		1	2	3	4	5	6

We are interested in your opinions about **playing the instrument written above**. Circle the response that best represents your opinion. Please answer as honestly as possible.

1. How much do you enjoy playing this musical instrument?	Not at all	A little bit	Somewhat	Pretty much	Very much
2. How much do you like playing this musical instrument?	Not at all	A little bit	Somewhat	Pretty much	Very much
3. How much fun is playing this musical instrument for you?	Not at all	A little bit	Somewhat	Pretty much	Very much

PLEASE CONTINUE WITH THE SURVEY ON THE NEXT PAGE



Tell Us About You

1. Gender: Male Female
2. How old are you? _____ years
3. When is your birthday? _____ / _____ / _____
4. What grade are you currently in? _____
5. How do you describe yourself? (circle all that apply)

African-American	White	Native American
Asian	Hispanic/Latino	Other _____
6. What activity are you involved in at this program (the one you're at right now)? Sport Music
7. Do you currently participate or have you participated on organized sports teams (with coaches and scheduled practices)?

Yes	No
IF YES, how many sports? _____	
8. Do you currently participate or have you ever participated in organized music activities (either private lessons or in an ensemble with a director and scheduled rehearsals)?

Yes	No
IF YES, how many instruments? _____	

· **PLEASE GO BACK AND CHECK THAT YOU COMPLETED ALL PAGES AND ITEMS.**

· **THEN, RAISE YOUR HAND AND ONE OF US WILL COME AROUND TO COLLECT.**

THANK YOU SO MUCH FOR YOUR HELP!



Appendix F

Equations for Random Item Parcels

SPORT PERCEIVED COMPETENCE.
COMPUTE = spcomp1 = MEAN(sPC1, sPC17).
VARIABLE LABELS spcomp1 'spcomp1'.
EXECUTE.

COMPUTE = spcomp2 = MEAN(sPC5, sPC9, sPC13).
VARIABLE LABELS spcomp2 'spcomp2'.
EXECUTE.

SPORT ANXIETY.
COMPUTE = san1 = MEAN(sanx3, sanx4).
VARIABLE LABELS san1 'san1'.
EXECUTE.

COMPUTE = san2 = MEAN(sanx1, sanx2, sanx5).
VARIABLE LABELS san2 'san2'.
EXECUTE.

MUSIC PERCEIVED COMPETENCE.
COMPUTE = mpcomp1 = MEAN(mPC1, mPC17).
VARIABLE LABELS mpcomp1 'mpcomp1'.
EXECUTE.

COMPUTE = mpcomp2 = MEAN(mPC5, mPC9, mPC13).
VARIABLE LABELS mpcomp2 'mpcomp2'.
EXECUTE.

MUSIC ANXIETY.
COMPUTE = man1 = MEAN().
VARIABLE LABELS man1 'man1'.
EXECUTE.

COMPUTE = man2 = MEAN().
VARIABLE LABELS man2 'man2'.
EXECUTE.

COMPUTE = man3 = MEAN().
VARIABLE LABELS man3 'man3'.
EXECUTE.

Appendix G

Factor Loading Tables for Gender Moderator Analyses

Sport Model: Completely Standardized Factor Loadings by Gender

Subscale/ Parcel/Item	Latent Variable	Boys (n = 155)		Girls (n = 211)	
		Factor Loading	Uniqueness	Factor Loading	Uniqueness
sFR_SEESup	Positive Friendship Quality	.698*	.513	.697*	.514
sFR_LoyInt	Positive Friendship Quality	.860	.261	.886	.215
sFR_TC	Positive Friendship Quality	.745	.445	.667	.555
sFR_CPP	Positive Friendship Quality	.693	.520	.750	.437
sFR_CR	Positive Friendship Quality	.655	.571	.626	.609
sCon1	Conflict	.876*	.233	.915*	.163
sCon2	Conflict	.916	.162	.914	.164
sCon3	Conflict	.833	.306	.827	.316
sPC1	Perceived Competence	.853*	.272	.779*	.394
sPC2	Perceived Competence	.721	.480	.738	.456
sEnj1	Enjoyment	.880*	.226	.927*	.141
sEnj2	Enjoyment	.938	.121	.852	.274
sEnj3	Enjoyment	.578	.666	.716	.488
sAnx1	Anxiety	.936*	.124	.848*	.281
sAnx2	Anxiety	.888	.211	.984	.033
sChallenge	Motivational Orientation	.865*	.251	.771*	.406
sCuriosity	Motivational Orientation	.679	.539	.733	.462

Note: * indicates the parameter estimate was set to a value of 1. All loadings were significant at $t \geq 1.96$.

Music Model: Completely Standardized Factor Loadings by Gender

Subscale/ Parcel/Item	Latent Variable	Boys (n = 155)		Girls (n = 211)	
		Factor Loading	Uniqueness	Factor Loading	Uniqueness
mFR_SEESup	Positive Friendship Quality	.625*	.609	.646*	.583
mFR_LoyInt	Positive Friendship Quality	.877	.230	.868	.247
mFR_TC	Positive Friendship Quality	.694	.518	.790	.376
mFR_CPP	Positive Friendship Quality	.639	.592	.712	.494
mFR_CR	Positive Friendship Quality	.544	.705	.645	.584
mCon1	Conflict	.869*	.244	.863*	.255
mCon2	Conflict	.941	.114	.921	.151
mCon3	Conflict	.858	.263	.890	.208
mPC1	Perceived Competence	.858*	.264	.831*	.309
mPC2	Perceived Competence	.843	.290	.880	.225
mEnj1	Enjoyment	.975*	.049	.957*	.085
mEnj2	Enjoyment	.984	.031	.966	.066
mEnj3	Enjoyment	.938	.120	.917	.158
mAnx1	Anxiety	.793*	.371	.806*	.351
mAnx2	Anxiety	.604	.635	.567	.679
mAnx3	Anxiety	.681	.537	.851	.276
mChallenge	Motivational Orientation	.854*	.270	.823*	.323
mCuriosity	Motivational Orientation	.861	.258	.795	.369

Note: * indicates the parameter estimate was set to a value of 1. All loadings were significant at $t \geq 1.96$.