

ADULT COMMUNICATIVE PLAY IN CLOSE FRIENDSHIPS

by

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ABSTRACT

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Adult communicative play is a pervasive interpersonal phenomenon and a defining element of most close friendships. With a few notable exceptions (e.g., Aune & Wong 2002; Aune & Wong, 2012; Baxter, 1992), adult communicative play is largely understudied within the field of interpersonal communication. A primary factor in satisfaction with friends is fulfillment of relational needs, specifically the needs of autonomy, relatedness, and competence, as described by self-determination theory (Deci & Ryan, 1985). In this project, I report two studies exploring the impact of play within close friendships. Study 1 examined the relationships between and among adult communicative play, interpersonal needs, and relationship satisfaction in close, same-sex, platonic friends. The results indicated support for all hypotheses, including support for the theoretical path model. In this path model, a) the effect of adult communicative play on relationship satisfaction is mediated by interpersonal need satisfaction and b) the effect of playfulness on satisfaction is fully mediated by play. Study 2 sought, first, to replicate the findings of Study 1 and, second, to extend Study 1 by exploring whether playfulness and play scores of one friend are associated with his or her partner's satisfaction, as well as whether playfulness scores are associated with a partner's score on play. Because of poor model fit in Study 2, the results of Study 1 could not be replicated; instead, post hoc alternative models were explored. Furthermore, path analysis results of an actor-partner interdependence model for indistinguishable pairs revealed that one partner's playfulness is associated with the other's reporting of play and one partner's play is associated with the other's relationship satisfaction. Implications, limitations, and future recommendations are then discussed.

CHAPTER 1. INTRODUCTION

“Let’s be friends! Wanna play?”

Although kids on a playground may be more forthright and energetic, adults do still play with their friends (Baxter, 1992; Bruess & Pearson, 1997). Of the various ways adults play (e.g., hobbies, sports, romance), this project focuses on adult communicative play. This includes behaviors like, but not limited to, name-calling, role-playing, telling stories or jokes, private languages/codes, teasing, and nonverbal behaviors like tickling, touching, rough-housing, and secret gestures.

Play, including adult communicative play, is a ubiquitous social phenomenon with many personal and relational benefits; it “strengthens our muscles, instructs our social skills, tempers and deepens our positive emotions, and enables a state of balance that leaves us poised to play some more” (Eberle, 2014, p. 231). Playful people are held to be more creative, humorous, motivated, and positive (see, for example: Glynn & Webster, 1992; Peterson & Seligman, 2004). Even into old age, adults who play tend to be more cheerful and relaxed, “embody fun,” and “continue to approach the world with a measure of creativity and whimsy” (Yarnal & Qian, 2011, p. 71).

Play, as Elkind (2008) noted, is essential for a full life. Through play, people reduce stress (Winnicott, 1971), work out issues (Terr, 1999), explore personal attachments (Gordon, 2014), and inject excitement into relationships (Baxter, 1987). Play fosters relationships in workplaces (Abramis, 1990), adds positive emotional experiences to help weather rough patches (Feeney & Lemay, 2012; Terr, 1999), and builds conflict-resolution skills (Betcher, 1981; Vanderbleek, Robinson, Casado-Kehoe, & Young, 2011). Van Leeuwen and Westwood (2008) contend that “understanding the individual reasons for ludic engagement in general and for

adults in particular would advance the understanding of play as a means to actively improve one's own well-being and experienced quality of life" (p. 160).

Adult play has been addressed in various scholarly disciplines (e.g., psychology, linguistics, anthropology, education, business, etc.); however, it has received less attention from interpersonal communication scholars. One notable exception is from Baxter (1992), who developed and tested a typology of adult play and its connections to relational closeness in romantic partners and same-sex friendships. Interpersonal scholars Aune and Wong (2002) proposed and tested a path model of antecedents (i.e., self-esteem and humor orientation) and consequences (i.e., positive emotion and relational satisfaction) of playfulness among romantic partners; they found that playfulness was positively associated with relationship satisfaction, but this relationship was potentially mediated by positive emotions. In a subsequent study, Aune and Wong (2012) examined both friends and romantic partners and found that, although frequency of play did not predict relational satisfaction for either relationship type, scores on their global "playfulness" measure (i.e., the overall amount of play reported) were positively associated with relationship satisfaction; this correlation increased the longer friends knew each other.

Adult Close Friendships

Adult friendships are important and have a host of benefits: People with more friends live longer (Perissinotto, Cenzer, & Covinsky, 2012; Sabin, 1993) and are healthier both physically and mentally (Cable, Bartley, Chandola, & Sacker, 2013; Fiori, Antonucci, & Cortina, 2006). People with friends are more satisfied with life (Gillespie, Lever, Frederick, & Royce, 2015; Rook & Ituarte, 1999), and life satisfaction is particularly associated with having close friends (Demir & Davidson, 2013; Demir, Orthel, & Andelin, 2013).

Of adult friendships, Gillespie et al. (2015) found virtually all men and women consider themselves to have close friends, with only 2–4% considering themselves to be without close friends. Men and women have a similar number of close friends (about 4 to 6), and most people (72% of men and 75% of women) are satisfied with the nature of their friendships. Friendships can be same- or cross-sex pairings, but same-sex friendships are more common (Gillespie et al., 2015). Regular face-to-face interaction with close friends reduces stress and increases well-being (Fuller-Iglesias, Webster, & Antonucci, 2013; van der horst & Coffe, 2012). The people most satisfied with life are those who socialize with friends (Diener & Seligman, 2002). As Csikszentmihalyi (1990) noted, “In our studies of the quality of daily experience it has been demonstrated again that people report the most positive moods overall when they are with friends” (p. 186).

Communication in Adult Close Friendships

Communication is central to adult friendships. Through communication, friendships are formed, defined, maintained, enhanced, and sometimes even ended, and quality of communication “is inexorably related” to the quality of these relationships (Keeley & Hart, 1994, p. 135). Friendships, according to Rawlins (2008), are unique because, as opposed to family or other groups (e.g., work or classmates), they are voluntary (i.e., formed without coercion or compensation), affectionate, personal, and equitable (i.e., each friend having equal power and autonomy within the context of the relationship). Because of these things, friendships last only as long as both partners continue to act toward each other in mutually satisfying ways; thus, friendships rely on communication in order to survive and thrive.

As people transition from childhood to adulthood, more communicative effort is spent in maintaining, enjoying, and enhancing friendships than forming new friendships (Gillespie et al.,

2015). Adult friendships exist in a network of other relationships (e.g., family, work, other friendships) and are subject to the shifting demands of adulthood (e.g., going to college, starting a career, moving, having kids, getting divorced, experiencing health problems); friends navigate these circumstances through communication. In friendships, adults engage in a variety of communicative behaviors, both positive and negative, including “disclosure of one’s thoughts and feelings, displays of affection, social support, resource exchange, co-operation, accommodation to a friend’s desires, co-ordination, sharing activities and interests, concealment, manipulation, conflict, competition, and the like” (Adams & Blieszner, 1992, p. 174). Absent from this list, however, is the inclusion of having fun and engaging in play.

Communication stages of adult friendships. As friendships develop, the nature of communication between partners evolves. For Altman and Taylor (1973), relational development happens in stages related to depth and breadth of intimacy and is intrinsically tied to self-disclosure between relational partners. Altman and Taylor identified four stages of relational development: orientation, exploratory, affective, and stable. In the orientation stage, interactions between partners involve little sharing of personal information. During the exploratory stage, partners begin exchanging information about a broader range of topics; however, items disclosed remain relatively superficial. As relational partners become more intimate, exchanges become deeper and disclosure of more deeply held beliefs, attitudes, and experiences are shared. Finally, at the most intimate stage of stable relationships, communication exchanges of all levels of information freely occur.

Knapp and Vangelisti (2008) proposed five stages of relationship development in their staircase model including stages of initiating, experimenting, intensifying, integrating, and bonding. The first four stages largely mirror Altman and Taylor (1973). In the initiation stage,

strangers exchange superficial information as they get to know each other; this phase is marked by introductions, formalities, and generally brief and positive exchanges. Initiation transitions to experimentation where partners explore similarities through self-disclosure and test for interpersonal compatibility. Partners that intrigue each other enough to pass the experimentation phase move into the intensifying stage. The intensifying stage is marked by more intimate self-disclosure, as well as expressions of affection and exploration of more complicated (i.e., less positive) conversational topics. In the integration phase, relational partners become a single unit, and communication on all levels becomes easy for partners. The final stage, bonding, is reserved for public and legal expressions of connection (e.g., marriage).

Stage theories like those presented above have been criticized for presenting too linear and simple a picture of relational development (Baxter & Montgomery, 1996). In their first iteration of the theory of relational dialectics, Baxter and Montgomery contended that relationships grow and develop through managing personal differences (i.e., openness, autonomy, and stability). These relational dialectics are ever-present, in flux, and constantly renegotiated. According to this approach, relationships do not grow in linear stages, but in cycles. This approach reflects the dynamic nature of friendships and provides a framework for considering how communication expectations, rules, skills, and rituals between dyads of adult friends may change over time or in specific circumstances.

Communication expectations of adult friendships. In friendships, people develop expectations of how their friends ought to behave and communicate. According to Hall (2012), friendship expectations fall into six broad categories: reciprocity, agency, enjoyment, instrumental aid, similarity, and communion. Hall's categories diverge from previous typologies (e.g., La Gaipa, 1987) with its inclusion of enjoyment as a separate factor. Previous research had

included expectations of enjoyment within other categories; however, factor analysis conducted by Hall of expectation-measure items supported treating enjoyment separately. As Rawlins (2008) offered, in addition to expectations of instrumental and relational support, friendships provide people an opportunity to have fun.

Communication skills in adult friendships. Adult friendships are developed and maintained through communication skills of initiation, responsiveness, self-disclosure, emotional support, and conflict management (Samter, 2003). Initiation skills are used to form friendships (e.g., introducing oneself, beginning and managing conversations, asking questions). With responsiveness skills, friends demonstrate that they are attentive to each other (e.g., listening and responding appropriately). Friends manage intimacy with self-disclosure skills (e.g., sharing personal information or feelings). Friends maintain their relationships, manage emotions, and navigate trauma with emotional support skills (e.g., advice, comfort, empathy, and praise). Finally, friends navigate tensions and disagreements with conflict management skills (e.g., criticism, assertiveness, and forgiveness). As with Adams and Blieszner's (1992) list of communication behaviors, play-related communication skills are not distinguished in this list of categories; Samter noted that "studies examining the lighter side of friendship are sorely needed" (p. 670).

Communication rules of adult friendship. In addition to communication skills, friendships operate, explicitly or implicitly, according to communication rules. Argyle and Hendersson (1984) interviewed and surveyed culturally diverse groups of men and women across several studies and identified four groups of rules common to adult friendship related to coordination of behaviors, intimacy, third parties, and social exchange. Coordination of behaviors rules included like "don't nag" and "respect each other's privacy." Third party rules

included the following: Stand up for your friend, be tolerant, don't criticize in public, keep each other's confidence, and don't be jealous of other relationships. Intimacy rules included "trust each other" and "confide in each other." Finally, social exchange rules included the following: Share news of success, show support, help in times of need, make the other happy, and repay debts. In contrast to the lists of communication expectations and skills mentioned above, Argyle and Hendersson's rules included an item related to play and having fun in adult friendship. For them, "joking/teasing" was categorized under the initial list of rules that regulate conflict; this item was not included in their final list of rules important to friendship because it did not receive enough support in their study.

Communication rituals of adult friendship. Related to communication expectations, skills, and rules, friends enact their relationship through interpersonal rituals (i.e., repeated communicative performances paying homage to a person, idea, or event). Rituals may be used as relational maintenance strategies, but more than that, they reflect and define the dynamics of the friendship itself. Bruess and Pearson (1997) examined the rituals of adult friendships through interviews and surveys and identified six major categories: social/fellowship, idiosyncratic/symbolic, communication, share/support/vent, tasks, and patterns/habits/mannerisms. Social rituals include enjoyable activities, getting together, participating in established events, and "escaping" everyday life. Idiosyncratic rituals include celebration, play, and doing favorite activities. Communication rituals are things like regular phone calls. Sharing, supporting, and venting rituals are regularly enacted behaviors around emotional support in the friendship. "Patterns, habits, and mannerisms" rituals reflect the regular interactions and rhythm that friends develop over time like always sitting in the same seating arrangement at restaurants. Of the four categories, social/fellowship rituals (65%) and

idiosyncratic/symbolic (9.5%) were the largest two categories, and both contain explicit references to fun and playful interactions. Of particular interest to this project are play rituals which “take many forms, such as joking, kidding, teasing, playing pranks on one another, or being generally silly. Also included are all the ways friends share humor and laughter, including silly phrases and ‘inside jokes’” (p. 39).

In a follow-up study to friendship rituals, Bruess and Pearson (2002) explored the functions of communicative rituals in friendship. In this study, they identified seven categories of functions related to friendship rituals: personal and relational stimulation, relational improvement, relational affirmation, support, self-affirmation, escape, and anti-ritual. Of the seven functions of rituals, the first factor (i.e., personal and relational stimulation) accounted for the greatest amount of variance (35.6%); incidentally, the category of personal and relational stimulation included several play-related functions like adding fun, humor/laughter, and entertainment; this category also included functions related to companionship, enhanced friendship, and loyalty.¹

Adult Communicative Play

As illustrated above, play is not always explicitly noted or recognized by scholars and researchers; nevertheless, play, specifically communicative play, is an important feature of adult friendships. For the purposes of this project, adult communicative play refers to intrinsically rewarding, message-based interactions between people over 18-years old. Although play can vary in quality and success (e.g., play attempts that are misunderstood, unappreciated, or unreciprocated versus those that are mutually enjoyable), this project focuses on play behaviors between close friends that are acknowledged and appreciated by both parties. This ideal form of

¹ Although “play” and “humor” are related, the terms refer to distinct phenomena.

adult communicative play is reflected in Greene and Pruim's (2018) conception of "quintessential play" as "code-based (verbal and nonverbal) instances of interpersonal engagement, understanding, and coordination, marked by a sense of novelty and enjoyment" (p. 1). Following from their formulation, three features of the best instances of play merit examination.

Intrinsically rewarding. Adult communicative play is intrinsically rewarding. The proximal focus is satisfaction with the interaction itself (see Glenn & Knapp, 1987; Miczo, 2004; Miller, 1973). Whereas other interactions may serve instrumental goals (e.g., giving advice, showing support, providing information), the primary function of adult communicative play is to have fun. The "fun factor" is prominent in many play scholars' definitions: Play is enjoyable (Fromberg, 1992) and optimistic (Eberle, 2014); play begins with a feeling of curiosity, is fun and exhilarating during, and remains as gratification after the interaction (Henricks, 2015); play is "an activity or behavior that (a) is carried out with the goal of amusement and fun, (b) involves an enthusiastic and in-the-moment attitude or approach, and (c) is highly interactive among play partners or with the activity itself" (Van Vleet & Feeney, 2015, p. 640). Intrinsic reward is so central to play that interactions cease to be play once they are no longer fun (Eberle, 2014).

Message-based. Adult communicative play refers to activities that are message-based. The concept centers on the message itself. Greene and Pruim (2018) emphasize this in their definition of "quintessential play" as "code-based," encompassing both verbal and nonverbal message features. Whereas a broad definition of play (e.g., Van Vleet & Feeney, 2015) would include all manner of playful behaviors like sports, sex, playing a musical instrument, or doing a crossword puzzle, adult communicative play focuses on message-based activities like teasing, goofing around, or telling stories. As Greene and Pruim (2018) noted, quintessential adult

communicative play “is constituted by the verbal and nonverbal behaviors that scholars in the field of Communication would take to be the standard “stuff” of interpersonal interaction (no special equipment required)” (pp. 3-4).

Interactive. Adult communicative play is interactive. Rather than focusing on enjoyable, solitary activities (e.g., writing a joke, playing a game alone, fantasizing), adult communicative play focuses on interpersonal interactions. It requires interaction because it is a mutual creation, flow-like and improvisational (Brown & Vaughan, 2009). Quintessential play self-organizes in real-time during an interaction as players enthusiastically come to an agreement about how to play together; this requires a high degree of reciprocity, synchrony, negotiation of control, and metacommunication (Henricks, 2011).

In the best play interactions, both parties willingly suspend the rules of normal activity, enthusiastically employing new rules for this fun, nonserious behavior (Bateson, 1956; Henricks, 2015; Huizinga, 1955; Miller, 1973). As Bateson (1956) observed, conversational partners at play create a paradox in which actions do not mean what they ought to mean. When conversational partners switch from serious to play, people must signal that a switch has happened so the other can assess that “this is play”; agreement on this point between partners constitutes a “playframe.” Adult communicative play requires coordinated interaction because playframes have their own mutually negotiated rules, diverging from the usual rules that govern conversation and communication.

Interpersonal Needs

Social behaviors, including those in adult communicative play episodes, are presumably motivated and guided by the drive to satisfy interpersonal needs. Individuals vary in which needs are most salient and how intense these needs are at any particular time; however, certain

interpersonal needs are common to most, if not all, people. Over the years, various scholars have theorized about people's fundamental driving forces.

Freud's Libido. Freud (1953) famously proposed that all psychic energy in human beings is driven by the libido (i.e., sexual desire). This energy is harnessed by either life instincts or death instincts. Life instincts involve the unconscious need for survival, growth, and reproduction. Death instincts concern the unconscious desire for death, isolation, and stasis.

Maslow's Pyramid. Maslow (1943) argued for a prepotent hierarchy of needs consisting of survival, safety, love, esteem, and self-actualization. After the basic needs of survival (i.e., the need for physical necessities like air, food, water, warmth, and sex) and safety (i.e., the need to be safe from potential dangers to self or resources for survival) are met, a person can focus on satisfying interpersonal needs of love and esteem. The need for love impels individuals to form relationships and social bonds. The need for esteem leads individuals to seek recognition for accomplishments. The final level of need is self-actualization, where individuals seek deeper meaning beyond themselves.

Schutz' Needs. Schutz in his early work (1958) identified inclusion, affection, and control as the three basic interpersonal needs. Need for inclusion concerns achieving a desired amount of physical and social contact with other people. Need for affection refers to a desire to feel liked and appreciated. Need for control refers to achieving and maintaining a desired level of agency over and with another person. In later work, Schutz (2009) modified his conception of affection to that of openness, which refers instead to pursuit of a desired level of sharing and disclosing in a relationship.

Deci and Ryan's Self-Determination Theory. More recently, Deci and Ryan (e.g., 2000) identified three primary needs in their self-determination theory (SDT): relatedness,

competence, and autonomy. The needs of SDT are interpersonal, meaning they are satisfied through relationships (e.g., romantic, familial, etc.), and regarding friendships, SDT needs are satisfied most by those with whom an individual is closest (Gillespie, Lever, Frederick, & Royce, 2015).

Relatedness. One need identified in SDT is relatedness. Relatedness refers to feeling connected, close to, and intimate with others (Sheldon et al., 2001). Relatedness is a key factor in relational health (La Guardia & Patrick, 2008). Relatedness is conceptually similar to intimacy (Reis & Patrick, 1996; Reis & Shaver, 1988), feeling cared about and for (Collins & Miller, 1994), and a sense of belonging (Baumeister & Leary, 1995). The satisfaction of relatedness needs is associated with greater psychological health (Talley, Kocum, Schlegel, Molix, & Bettencourt, 2012).

Competence. The second psychological need identified in SDT is competence. People want to feel they know how to, and are effective in, what they do (Deci & Ryan, 1985). People who feel competent consider themselves successful at completing tasks, mastering challenges, and being generally capable (Sheldon et al., 2001). Competence is conceptually related to self-efficacy (Bandura, 1977) and goal-attainment (Carver & Scheier, 1990). The satisfaction of competence needs also is associated with greater psychological (Talley et al., 2012) and relational health (La Guardia & Patrick, 2008).

Autonomy. The third need identified in SDT is autonomy. Autonomy should be differentiated conceptually from independence or individuality (Chirkov, Ryan, Kim, & Kaplan, 2003); autonomy in SDT refers to feeling “in charge” or self-governing of one’s own actions (Deci & Ryan, 2000). Regarding autonomy needs, people want to feel agentic, like they have a choice in their activities. Autonomy is contrasted by heteronomy, which is “feeling compelled or

controlled in one's behavior" (La Guardia & Patrick, 2008, p. 202). Ratelle, Simard, and Guay (2013) found that autonomy support from friends was associated with subjective well-being. Autonomous individuals feel as though they have gotten what they wanted, did things how they wanted, and truly expressed themselves (Sheldon et al., 2001).

Salience of SDT needs. Of the many possible candidates for psychological needs reviewed above, Sheldon, Elliot, Kim, and Kasser (2001) explored ten of the most common candidates (i.e., autonomy, relatedness, competence, self-actualization, physical thriving, pleasure, money/luxury, security, self-esteem, and popularity/influence) in a study with US students and found the three needs of SDT (i.e., relatedness, autonomy, and competency) were ranked among the top four; the other being self-esteem.

Ubiquity of SDT needs. The interpersonal needs of relatedness, competence, and autonomy may quite well be universal. In a second study by Sheldon et al. (2001) involving students from both the US and South Korea, the researchers examined the relationship between interpersonal needs and positive affect, negative affect, and affect-balance (i.e., the difference between positive and negative affect scores) for students from both countries. The SDT needs of competence, autonomy, and relatedness were all predictive of positive affect and affect balance for both groups. Further indicative of SDT's ubiquity, Chen et al. (2015) examined SDT need satisfaction across four countries (China, Belgium, USA, and Peru) and found need satisfaction correlated significantly with well-being and vitality, and that its frustration was associated with increased depressive symptoms.

Interrelatedness of SDT needs. Although the needs specified in SDT are conceptually distinct, functionally they are interrelated. The drive for competence, for example, likely would not increase motivation unless a person also feels autonomous. Hodgins, Koestner, and Duncan

(1996) examined the role of autonomy and control in college students' relationships with their parents and found that feeling autonomous was associated with positive relational outcomes (e.g., closeness and honesty), whereas feeling controlled had a negative effect. The authors surmised that autonomy and relatedness are distinct relational needs; however, support for autonomy fosters feelings of relatedness.

Need Satisfaction and Relationship Satisfaction

Conceptual associations between need satisfaction and relationship satisfaction. La Guardia and Patrick (2008) contend that satisfaction of the needs identified in self-determination theory is fundamental to close relationships because the drive to satisfy these needs underpins all interpersonal motivations. These needs function as internal motivating forces that drive people to act in certain ways, to be naturally drawn to some situations and not others. As Patrick, Knee, Canevello, and Lonsbary (2007) noted, "it is through the satisfaction of these needs that individuals are able to move toward the experience of achieving effectiveness, connectedness, and intrinsic motivation" (p. 435). As natural as it is for a flower to lean toward sunshine because the sunshine meets its needs, so it is for a person to seek a friend that satisfies his or her desires for feeling competent, related, and autonomous. Generally, people are drawn to other people who meet their needs, and the relationships that meet needs are more likely to become satisfying and stable. Over time, these stable relationships can develop into friendships, and the people that best facilitate need satisfaction might be expected to become close friends.

Empirical evidence bearing on the association between need satisfaction and relationship satisfaction. Need satisfaction (i.e., need fulfillment) has been shown to be positively and strongly correlated with relationship satisfaction. Hadden, Smith, and Knee (2013) found a significant, positive relationship between relatedness and partner satisfaction in romantic

relationships. And, in a second wave of data-collection, the authors found that, four weeks later, the association between relatedness and relationship satisfaction remained significant. Demir and Davidson (2013) studied SDT need satisfaction in best friends; although they did not explicitly explore relationship satisfaction, they did find that need satisfaction had a large and significant correlation with happiness, and happiness is highly correlated with relational satisfaction in close friends (Mendelson & Aboud, 2012). Patrick et al. (2007) studied the role of need fulfillment in relational well-being for romantic partners and found that relational satisfaction had a large, significant correlation with each of the three needs identified by SDT.

In light of these findings, I hypothesize:

H₁: Interpersonal need satisfaction is positively associated with relationship satisfaction for close friends.

Play, Needs, and Relationship Satisfaction

Need satisfaction and adult communicative play. People are more motivated to engage in activities when all three of their interpersonal needs (i.e., autonomy, competence, and relatedness) are satisfied, and they are also fulfilled by and through these activities when their needs are satisfied (Deci & Ryan, 2000). Interpersonal needs can be satisfied in adult close friendships by a number of communicative behaviors, including play. Although play may lack the gravitas of communicative behaviors like comforting or self-disclosure, play is an essential feature of adult friendships that allows friends to enjoy and explore each other in the context of the relationship.

As described previously, adult communicative play is characterized as being intrinsically rewarding, message-based, and interactive. All three of the interpersonal needs could be satisfied through each of these elements of play; however, some direct connections seem evident. For

example, as an intrinsically rewarding experience, adult communicative play is an opportunity for close friends to engage with each other for the primary purpose of enjoying each other's company; ideal moments of play should allow friends to celebrate their relatedness and further forge the bond between them. As message-based behavior, adult communicative play requires each friend to recognize the playframe and, then, to interact competently according to the agreed-upon norms of the playframe. Finally, because of its interactivity, adult communicative play requires each friend to operate independently and freely within the interaction; quintessential moments of play should foster a sense of autonomy within each person engaged in the playframe.

As such, adult communicative play should be related to need satisfaction in adult friendships. Play is one aspect of communicative behavior that friends use to satisfy their psychological needs in relationships, and communicative play is both a catalyst and signifier of relationship satisfaction of adult friends. Adult communicative play has attributes that relate to and meet the psychological needs of autonomy, competence, and relatedness. I argue that adult communicative play is positively associated with satisfaction of the SDT needs.

Autonomy. Play of close friends should be positively associated with satisfaction of autonomy needs. Autonomy needs in friendships refers to one's need to not feel compelled or forced into an activity, as well as a sense of being an independent agent in activities. This does not necessarily mean a person might have little desire to be compelled or forced into something, but rather that the interaction matches and meets how autonomous one wants to be in that particular interaction. As Henricks (2011) noted, successful play requires a high degree of reciprocity, synchrony, and negotiation of control, and as Greene and Pruijm (2018) added, quintessential play is marked by understanding and coordination. To the extent that

quintessential play between close friends is negotiated so as to respect each friend's role in the interaction, I argue that adult communicative play should be associated with, and potentially fosters, the satisfaction of autonomy needs.

Competence. Adult communicative play between close friends should be positively associated with satisfaction of competence needs. Competence in friendships refers to feeling like one knows “what he or she is doing.” Because the best instances of adult communicative play necessitate interpersonal coordination, both partners must possess insight and skill pertaining to how to behave in an interaction with their play partner. To the extent that close friends understand each other deeply and are competent concerning how to play well, play is associated with, and potentially fosters, satisfaction of competence needs.

Relatedness. The adult communicative play of close friends should be positively associated with satisfaction of relatedness needs. Relatedness in friendship refers to a sense of togetherness, connection, and mutual caring. To the extent that adult communicative play is highly engaging and enjoyable (Greene & Pruijm, 2018; see also: Van Vleet & Feeney, 2015), it should be expected that adult communicative play should be associated with, and potentially foster, the satisfaction of relatedness needs.

Empirical evidence bearing on the association between need satisfaction and play.

Although there is no research to date bearing on the relationship between satisfaction of SDT needs and adult communicative play, there is some suggestive evidence in studies of SDT need satisfaction and its relation to game-play, including online game-play. Ryan, Rigby, and Przybylski (2006) applied self-determination theory to examine people's motivations for playing online games. They conducted three studies on individual play and a fourth in the interpersonal context of multi-player games. Ryan et al. found that need satisfaction fostered play; in their

studies, participants who felt autonomous preferred to continue playing more than students who did not feel autonomous. In the multi-player context, all three needs of SDT were predictive of desire for future play.

Sheldon and Filak (2008) manipulated support for satisfaction of relatedness, competence, and autonomy needs of college students in a game-learning environment to examine their impact on outcomes like positive/negative affect, intrinsic motivation, recommendations for play, and performance. Students whose competence and relatedness needs were better satisfied felt more positive after the game; furthermore, need satisfaction fostered more potential play because need-satisfied students were more likely to recommend the game to others.

Radel, Pelletier, Sarrazin, and Baxter (2014) explored whether junior-high students exposed to autonomy-thwarting conditions for playing a game would be more or less likely to engage in future play in that same environment. Although autonomy-thwarted students reported more motivation to continue playing during the game (perhaps to compensate for feeling frustrated), thwarting autonomy needs ultimately inhibited play because autonomy-thwarted students were less likely to want to play the same game again in the future.

On the basis of the conceptual and empirical foundations established here, then, the following hypotheses are advanced:

H_{2a}: Adult communicative play between close friends is positively associated with satisfaction of autonomy needs.

H_{2b}: Adult communicative play between close friends is positively associated with satisfaction of competence needs.

H_{2c}: Adult communicative play between close friends is positively associated with satisfaction of relatedness needs.

Adult communicative play and relational satisfaction. Because play is held to be enjoyable and engaging (Greene & Pruijm, 2018), play should be positively associated with relationship satisfaction. Two studies afford evidence bearing on this point. First, Baxter (1992) explored the effects of communicative play on relational closeness in romantic and platonic relationships. Baxter developed a typology of communicative play behaviors including private verbal codes, role-playing, teasing, prosocial physical behaviors, antisocial physical behaviors, games, gossiping, public performance, along with a “miscellaneous” category. With length of relationship controlled, the total amount of play for friends was a significant predictor of relationship closeness, as was the breadth of play types reported. Second, Aune and Wong (2012) found that a composite of play frequency scores across all types of play assessed² was associated with relationship satisfaction of friends ($r = .25$) and increased with relationship length ($r = .31$).

In light of these findings, I hypothesize:

H₃: Adult communicative play is positively associated with relationship satisfaction for close friends.

Furthermore, I argue that interpersonal need satisfaction, adult communicative play, and relationship satisfaction function together such that there is both a direct and mediated relationship between adult communicative play and relationship satisfaction. Put succinctly, friends who play more are more satisfied in their relationship, in part, because their interpersonal needs have been met. A path model of the proposed relationships is given in Figure 1:

² Aune and Wong (2012) defined this as “playfulness;” that term is defined and used differently in this project.

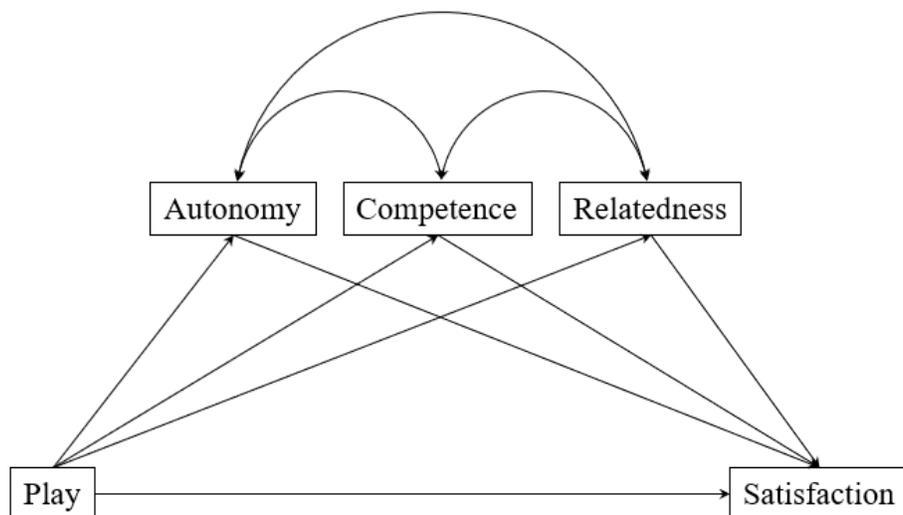


Figure 1. Theoretical path model: Relationships among adult communicative play, autonomy, competence, and relatedness needs satisfaction, and relationship satisfaction.

Thus, I hypothesize:

H4: The relationship between adult communicative play and relationship satisfaction is mediated by interpersonal need satisfaction.

Dispositional Playfulness

Dispositional playfulness and adult communicative play. Although they are related, playfulness and play are distinct concepts (Van Vleet & Feeney, 2015). “Play” refers to behaviors, whereas “playfulness” is a disposition. Playfulness is generally described in positive terms like “lighthearted” and “transformative” (Power, 2011), “friendly” and “spontaneous” (Barnett, 2007), or “upbeat” and “mischievous” (Yarnal & Qian, 2011). Descriptions and definitions of playfulness highlight a positive disposition paradoxically reflective of benignity and violation.

Playfulness can be delineated into constituent factors (e.g., Glynn and Webster’s [1992] adult playfulness scale taps spontaneity, expressiveness, fun, creativity, and silliness), yet a positive paradoxical tension is at the core. Proyer and Jehle (2013) conducted a principle

component analysis on 17 measures of adult playfulness and found five common factors: humorousness, cheerfulness/uninhibitedness, expressiveness, other-directedness, and intellectuality/creativity. Humorousness referred having a good sense of humor, joking around, being perceived as humorous by others, and appreciating absurdity and nonsense. Cheerfulness/uninhibitedness referred to having a cheerful disposition, being positive and optimistic, not being shy, and being free-spirited. Expressiveness referred to liking attention, being emotional, being talkative, and perhaps even a willingness to be offensive. Other-directedness referred to being outgoing, a desire to work and play with others, being sensitive to other's needs, and liking to laugh and have fun with others. Finally, intellectuality/creativity referred to being creative, having new thoughts, developing new ideas, and the enjoyment of problem-solving.

Playfulness is made manifest in play. Glynn and Webster (1992) defined playfulness as “a predisposition to define and engage in activities in a non-serious or fanciful manner to increase enjoyment” (p. 82). Van Vleet and Feeney (2015) echoed this sentiment, defining playfulness as “a dispositional tendency to engage in play (i.e., an inclination to pursue activities with the goal of amusement or fun, with an enthusiastic and in-the-moment attitude, and that are highly interactive in nature)” (p. 632). Just as people with other dispositional tendencies tend to act in ways commensurate with those dispositions (e.g., extroversion, conscientiousness, antagonism, neuroticism), playful people should tend to play more.

Within adult friendships, people see playfulness as helping them be happy, have fun, motivate themselves or others, be creative, cultivate relationships, relax, and deal with stress (Proyer, 2014). Certainly, situational, relational, personal, or other factors may affect whether a friend decides to engage in play in any given moment, regardless of his or her dispositional

tendencies. For example, a normally playful person might refrain from playing in a formal occasion or because his or her friend is not in the mood. Alternatively, a normally less-than-playful friend might engage in play because the situation warrants lightening the atmosphere. Over the long term, however, playful people are likely to play more in their adult friendships.

Empirical evidence connecting dispositional playfulness and adult communicative play. Only a few empirical studies have specifically examined playfulness and play behaviors of adult friends (e.g., Baxter, 1992; Proyer, 2017). Baxter compared frequencies of reported play instances with playfulness as measured by Betcher's (1977) Play Questionnaire II (PQII), a 28-item instrument with items like "We often try out new things with each other" and "I have fun acting silly with my partner." Baxter found a significant correlation between play and playfulness for adult, same-sex friends, $r(49) = .49, p < .001$.

Proyer (2017) assessed playfulness using his Short Measure for Adult Playfulness (SMAP; Proyer, 2012), a five-item instrument including items like "I am a playful person." To develop a measure of play behaviors, Proyer asked participants, mostly undergraduate students, whether they had engaged in a list of 22 playful behaviors in the past day. Examining scores from the two measures, he found that everyday play behaviors were positively associated with playfulness, $r(276) = .38, p < .001$. This association of playfulness and play behaviors should be expected, and in an effort to examine the applicability of Proyer's findings regarding dispositional playfulness in the context of friendships, the following hypothesis is posited (see also, Figure 2):

H₅: Dispositional playfulness is positively associated with adult communicative play in friendship contexts.

Dispositional playfulness and relationship satisfaction. Playfulness is a disposition related to other positive traits like agreeableness, conscientiousness, emotional stability, and extroversion, as well as positive characteristics like being expressive and fun (Proyer, 2012). Playfulness-related traits like agreeableness and extraversion have been found to be positively associated with friendship satisfaction of adult friends (Wilson, Harris, & Vazire, 2015) and perceived quality of friendships (Demir & Weitekamp, 2007). Drawing from his own findings, Proyer posited that “the playful adult could be described as cheerful, non-serious, and relatively free of bad mood. Greater playfulness correlated with lower inclination to experiencing sadness in cheerfulness-evoking situations or feeling ill-humored in such situations” (p. 992). When interviewed about their definition of the term “friend,” adults most often described someone they liked and could get along with easily (Roberto & Kimboko, 1989); this description of a likeable, easy-to-get-along-with person is in keeping with Proyer’s portrayal of a playful person. Because of their agreeable and likeable dispositions, playful people are likely to have more satisfying interactions and, thus, more satisfying relationships (Demir & Weitekamp, 2007; Wilson, Harris, & Vazire, 2015).

Empirical evidence connecting dispositional playfulness and relationship satisfaction. Playfulness has been found to be positively associated with marital satisfaction (Lutz, 1982), and similar associations have been found with friendship satisfaction (Baxter, 1992; Aune & Wong, 2002; Proyer, 2014). Baxter examined the association between playfulness and relational closeness, a construct similar to relationship satisfaction, for same-sex, college-aged friends; she found a significant, positive correlation, $r(49) = .80, p < .001$. Aune and Wong, using the same measure of playfulness as Baxter, conducted research on adult romantic partners and found a significant, positive correlation between playfulness and relationship satisfaction,

$r(111) = .55, p < .01$. Proyer administered an online survey for adults with measures for dispositional playfulness (SMAP) and general satisfaction with “a relationship;” he surveyed two groups and found a significant and positive, albeit small, correlation for the first, $r(159) = .16, p < .05$, and second group, $r(556) = .14, p < .01$. In light of these conceptual considerations and previous relevant research, the following hypothesis is proposed (see also, Figure 2):

H₆: Dispositional playfulness is positively associated with relationship satisfaction in friendship contexts.

Furthermore, I argue that dispositional playfulness and adult communicative play may function together as predictors of relationship satisfaction. As previous research has suggested (see above), both play and playfulness have been found to be positively associated with relationship satisfaction in friendships. Because play, however, is a manifestation of playfulness, at least part of the association between playfulness and relationship satisfaction should be accounted for by play. Simply put, part of why playful people may be more satisfied with their close friendships is because they play with their friends. Therefore, the effect of dispositional playfulness on relationship satisfaction should be mediated by adult communicative play. Given this reasoning, the following hypothesis is proposed:

H₇: The relationship between dispositional playfulness and relationship satisfaction is mediated by adult communicative play.

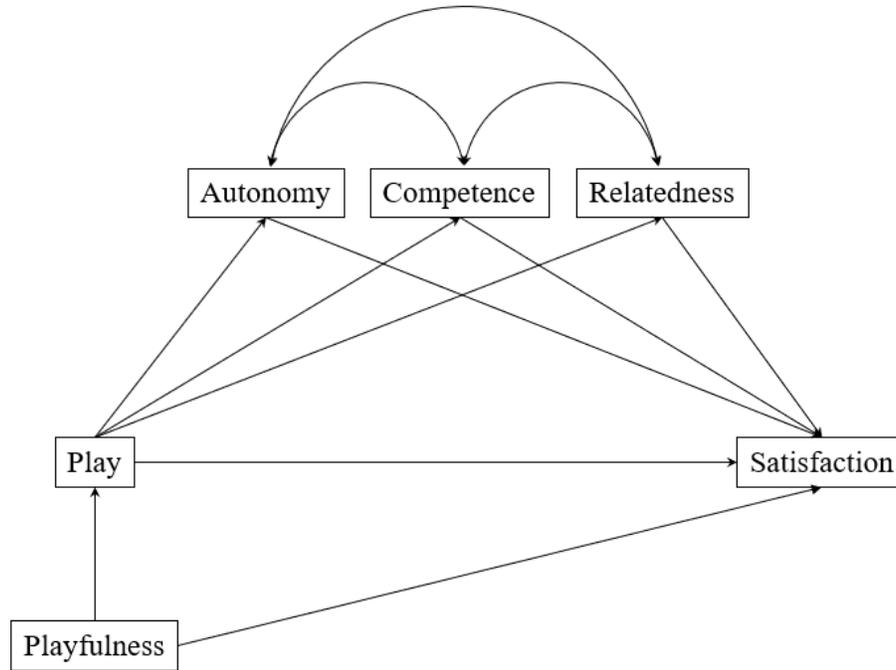


Figure 2. Theoretical path model: Relationships among adult communicative play, autonomy, competence, and relatedness needs satisfaction, and relationship satisfaction including dispositional playfulness.

CHAPTER 2. STUDY 1: INDIVIDUALS

The purpose of this project, involving two studies, is to explore how adult communicative play functions in close friendships. The first study is designed to explore the central propositions of the path model presented in Figure 2, specifically the associations among adult communicative play, interpersonal need satisfaction, relationship satisfaction, and dispositional playfulness.

Study 1 Methods

Participants. For Study 1, participants were 491 respondents recruited from Amazon Mechanical Turk on March 5, 2018. Amazon MTurk participants received compensation of \$1 in Amazon credit through MTurk upon completion of the survey. For this study, 601 people began the survey. Of those respondents, thirty-two did not fill out the survey completely, one marked zero for age, seventeen respondents noted that the friend they discussed was less than a close friend, two respondents took less than 90 seconds to complete the survey and also marked the same answer for every item, and fifty-eight answered the comprehension check question incorrectly. After cleaning, the remaining sample consisted of 491 respondents.

Age. Respondents ranged in age from twenty to eighty years old ($M = 35.16$ years).

Sex. The respondents were approximately evenly divided by sex, with 51.3% male ($n = 251$) and 48.5% female ($n = 238$) and .4% other ($n = 2$).

Race. Regarding race, 72.9% of the sample was white ($n = 358$), 3.9% were Hispanic or Latino ($n = 19$), 6.3% were black ($n = 31$), 1% were Native American ($n = 5$), 14.3% were Asian or Pacific Islander ($n = 70$), and 1.6% were other ($n = 8$).

Education. Regarding education, the largest percentage of 47.3% had a bachelor's degree ($n = 232$); of the rest, .4% had some high school ($n = 2$), 6.1% had high school diplomas ($n =$

30), 18.1% had some college ($n = 89$), 1.8% had vocational training ($n = 9$), 10% had an associate's degree ($n = 49$), 12.8% had a master's degree ($n = 63$), and 3.5% had a professional or doctoral degree ($n = 17$).

Relationship status. Regarding relationship status, the sample was split between single at 45.8% and married at 45.8%. The rest were either divorced, widowed, or separated.

Religion. Regarding religion, 30.1% were Protestant ($n = 148$), 16.1% were Roman Catholic ($n = 79$), 13.2% were atheist ($n = 65$), 12.4% were agnostic ($n = 61$), 11.2% were nothing in particular ($n = 55$), 8.6% were Hindu ($n = 42$), and under 5% were Muslim, Mormon, Orthodox, or Jewish. Those who identified as something else (3.9%) listed religions including Wiccan, spiritual, Jehovah's Witness, Christian, Child of Yahweh, Buddhist, and Quaker.

Friend type. Participants were asked to label their relationship with the friend they would discuss in this study. Of the respondents, 39.7% listed their friend as a "best friend" ($n = 195$), 38.5% listed their friend as "one of my best friends" ($n = 189$), and 21.8% labeled their friend as a "close friend" ($n = 107$).

Friendship length. In addition, respondents were asked to indicate how many years they had known their close friend. Years of friendship ranged from 0 to 50 years ($M = 12.88$ years).

Study 1 Procedure

Participation in this study occurred online; the survey was presented via Qualtrics, and the procedures were approved by the IRB of Purdue University. Participants were informed that the survey concerned their relationship with a close, same-sex, non-romantic friend. Participants were asked if they had a friend who met these criteria; if they did not, they were released from the survey. The remaining participants were asked to read the informed consent form and click "yes" if they consented to be part of survey. If participants agreed, they were directed to the rest

of the study. Participants were then instructed to think about one specific person with whom they had a close, same-sex, non-romantic friendship, and that this person should be kept in mind while answering questions during the survey. Each participant was asked to answer a series of general demographic questions regarding age, race, education, marital status, friendship status, and years of friendship (see above). Participants were then asked to fill out measures related to need satisfaction, dispositional playfulness, adult communicative play, and relationship satisfaction. After the survey was completed, participants were thanked and informed that they would be compensated upon confirmation that they had fully completed the survey.

Study 1 Measures

Adult Communicative Play. Play was assessed with 18 items from Proyer's (2017) list of 22 everyday playful behaviors. Four items were removed because they were intrapersonal (e.g., "I was very imaginative" or "I playfully thought about a new idea") rather than interpersonal behaviors. Whereas Proyer's measure prompted individuals to recall whether they had personally engaged in specific types of play over the past 24 hours, the measure of play for this study was modified to assess play between close friends. Participants, thus, were prompted to indicate whether they typically engaged in each of the listed behaviors with their close friend (see Appendix B).

Interpersonal Need Satisfaction. Interpersonal need satisfaction was assessed with the Basic Psychological Need Satisfaction in Relationships Scale (La Guardia et al., 2000). This instrument (see Appendix C) assesses satisfaction of relatedness, competence, and autonomy needs, and the three sub-scales can be combined to create a global score for interpersonal need satisfaction. Items for each include: relatedness (e.g., "When I am with XXXXXXXX, I feel loved and cared about," or "When I am with XXXXXXXX, I feel a lot of closeness and intimacy."),

competence (e.g., “When I am with XXXXXXXX, I feel like a competent person,” or “When I am with XXXXXXXX, I feel very capable and effective.”), and autonomy (e.g., “When I am with XXXXXXXX, I feel free to be who I am,” or “When I am with XXXXXXXX, I have a say in what happens, and I can voice my opinion.”). Each subscale consists of three items employing a 7-point Likert-type response format with ratings ranging from 1 (*not at all true*) to 7 (*very true*). Demir and Özdemir (2010) reported that reliabilities for each subscale this instrument were .65 for autonomy, .74 for competence, and .84 for relatedness.

Dispositional Playfulness. Dispositional playfulness was measured using Proyer’s (2012) Short Measure for Adult Playfulness (SMAP). The SMAP uses five items to assess playfulness (e.g., “I am a playful person,” “I frequently do playful things in my daily life.”). Item responses are given on a 7-point scale with ratings from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach’s alpha coefficients are between .80 to .89 in Proyer (2012).

Relationship Satisfaction. The satisfaction subscale from the revised McGill Friendship Questionnaire--Respondent's Attachment (MFQ-RA) as utilized by Mendelson and Aboud (2014) was used to assess friendship satisfaction of close, same-sex friends. The satisfaction subscale consists of seven items like “I am satisfied with my friendship with XXXXXXXX” and “I am pleased with my friendship with XXXXXXXX.” Each item is assessed on a 9-point Likert-type scale (-4 = *very much disagree* and 4 = *very much agree*). The revised friendship questionnaire used by Mendelson and Aboud revealed a Cronbach’s α of .96.

Study 1 Analysis

First, associations between adult communicative play, interpersonal need satisfaction, relationship satisfaction, and dispositional playfulness were analyzed via Pearson correlations. Second, a series of path analyses were conducted with AMOS 24 to explore the proposed

mediating paths. In order to achieve sufficient internal reliability for SDT needs satisfaction, the reverse-coded items in the measure were removed, one from each subscale.³

Study 1 Results

Preliminary Analyses. Bivariate correlations were based on a sample of 491 respondents. A post hoc analysis of achieved power indicated that a study with 491 respondents had a power of greater than .97 to detect two-tailed correlations of $r = .20$ with a significance level of $p < .01$. Means, standard deviations, skewness, kurtosis, and internal reliability of all measures in Study 1 are shown in Table 1. The findings of Study 1 suggest that adult communicative play is an important factor in satisfaction in close friendships. Moreover, the results from Study 1 support a model of the effect of play on satisfaction in close friendships that includes interpersonal need satisfaction.

Table 1

Summary of Means, Standard Deviations, Skewness, Kurtosis, and Reliability Coefficients for Independent and Dependent Variables in Study 1

	<i>M</i>	<i>SD</i>	Sk	Ku	α
Adult Communicative Play	13.73	3.95	-1.01	0.62	.85
Autonomy	6.10	0.95	-1.18	1.27	.73
Competence	5.93	0.99	-0.80	0.21	.73
Relatedness	5.51	1.20	-0.80	0.15	.72
Playfulness	5.10	1.12	-0.83	0.82	.87
Satisfaction	7.98	1.20	-1.66	3.74	.95

³ When the reverse-coded item was dropped from each subscale, internal reliability for autonomy improved from $\alpha = .65$ to $\alpha = .73$, competence from $\alpha = .63$ to $\alpha = .73$, and relatedness from $\alpha = .53$ to $\alpha = .72$.

Table 2

Summary of Zero-Order Correlations in Study 1

	Adult Communicative Play	Autonomy	Competence	Relatedness	Playfulness
Autonomy	.20**				
Competence	.23**	.65**			
Relatedness	.28**	.41**	.49**		
Playfulness	.54**	.20**	.29**	.25**	
Satisfaction	.29**	.61**	.58**	.51**	.21**

Note. $df = 489$, * $p < .05$. ** $p < .01$.

Hypotheses. To test the hypotheses advanced in Chapter 1, a path analysis was conducted using AMOS 24 (see Table 3 and Figure 3). Goodness-of-fit for the path model was assessed via model chi-square, the root mean square error of approximation (RMSEA; Kline, 2005), comparative fit index (CFI; Bentler, 1990), and the Tucker Lewis index (TLI; Tucker & Lewis, 1973). The chi-square test did not indicate good model fit, $\chi^2(3, N = 491) = 22.72$, $p < .001$; however, chi-square tests of fit are sensitive to sample sizes greater than 200 (Schumacker & Lomax, 1996). The RMSEA was higher than conventionally accepted for close fit, but the confidence interval indicated the possibility for reasonable approximate fit (Browne & Cudeck, 1992), RMSEA = .12, 90% CI [.07, .16]. Although the first two indices were not indicative of good fit, the last two indices indicated good model fit, CFI = .98; TLI = .90.

Table 3

Standardized and Unstandardized Coefficients for Final Path Model

	β	<i>B</i>	<i>SE</i>	C.R.
Autonomy \leftarrow Play	.20**	.85**	.19	4.45
Competence \leftarrow Play	.23**	1.02**	.20	5.12
Relatedness \leftarrow Play	.28**	1.53**	.24	6.41
Satisfaction \leftarrow Autonomy	.35**	.45**	.05	8.31
Satisfaction \leftarrow Competence	.23**	.26**	.05	5.09
Satisfaction \leftarrow Relatedness	.23**	.23**	.04	6.05
Satisfaction \leftarrow Play	.13**	.73**	.19	3.39
Satisfaction \leftarrow Playfulness	-.06	-.07	.04	-1.63
Play \leftarrow Playfulness	.54**	.11**	.01	14.18

Note. "C.R." denotes critical ratios. * $p < .05$. ** $p < .01$.

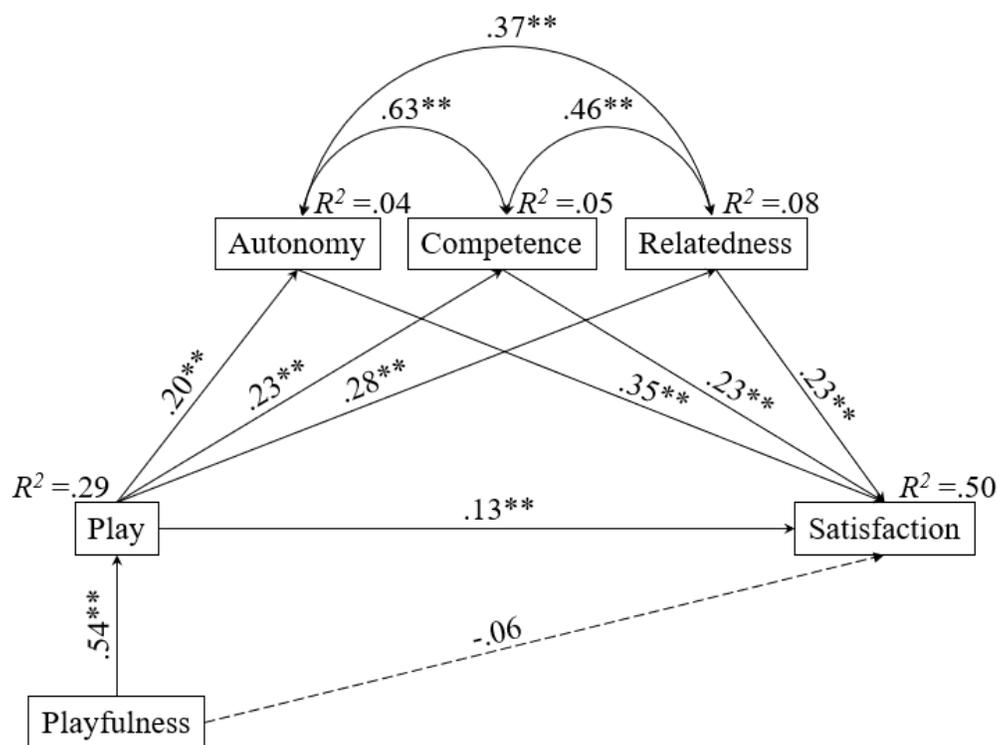


Figure 3. Standardized regression weights of the path model: Relationships among adult communicative play, autonomy, competence, and relatedness needs satisfaction, relationship satisfaction, and playfulness. * $p < .05$. ** $p < .01$.

H₁ predicted that interpersonal need satisfaction would positively affect relationship satisfaction for close friends. Interpersonal need satisfaction (i.e., autonomy, competence, relatedness) had a significant effect on satisfaction with close friendships: autonomy, $\beta = .35$, $p =$

.002⁴, CI [.22, .48]; competence, $\beta = .23$, $p = .002$, CI [.09, .36]; and relatedness, $\beta = .23$, $p = .002$, CI [.14, .32]. H₁ is supported.

H_{2a}, H_{2b}, and H_{2c} predicted that adult communicative play between close friends would positively affect satisfaction of autonomy, competence, and relatedness needs. Adult communicative play was a significant predictor of autonomy, $\beta = .20$, $p = .002$, 95% CI [.10, .29], competence, $\beta = .23$, $p = .002$, 95% CI [.14, .31], and relatedness need satisfaction, $\beta = .28$, $p = .002$, 95% CI [.19, .36]. The path model accounted for 4% of the variance in autonomy need satisfaction, 5% of the variance in competence need satisfaction, and 8% of the variance in relatedness need satisfaction. H_{2a}, H_{2b}, and H_{2c} are supported.

H₃ predicted that adult communicative play would positively affect relationship satisfaction for close friends. Ignoring any mediators, adult communicative play was positively associated with relationship satisfaction of close friends, $\beta = .29$, $p = .002$, 95% CI [.18, .39]. H₃ is supported.

H₄ predicted that the direct effect of adult communicative play on relationship satisfaction would be mediated by interpersonal need satisfaction. When the mediators were included in the model, the effect of play on satisfaction decreased from $\beta = .29$ to $\beta = .13$, $p = .002$, CI [.03, .18], thus demonstrating the effect of the mediators. An overall indirect effect was present, $\beta = .18$, $p = .002$, 95% CI [.12, .25]. The relationship between play and satisfaction is mediated by autonomy, competence, and relatedness need satisfaction. H₄ is supported.

H₅ predicted that dispositional playfulness would positively affect adult communicative play. Dispositional playfulness was a significant predictor of adult communicative play of close

⁴ The p values presented in this and subsequent path analyses are those associated with the bootstrapped standardized regression weights.

friends, $\beta = .54, p = .002, 95\% \text{ CI } [.47, .61]$. The path model accounted for 29% of the variance in play. H₅ is supported.

H₆ predicted that dispositional playfulness would positively affect relationship satisfaction with close friends. Ignoring any mediators, dispositional playfulness was a significant predictor of relationship satisfaction, $\beta = .21, p = .002, 95\% \text{ CI } [.11, .30]$. H₆ is supported.

H₇ predicted that the effect of dispositional playfulness on relationship satisfaction would be mediated by adult communicative play in close friendships. Although playfulness predicted relationship satisfaction while ignoring any mediators (see above), this relationship became insignificant when play was included in the model as a mediator, $\beta = -.06, p = .193, 95\% \text{ CI } [-.15, .03]$. The path model, including paths from play and interpersonal need satisfaction, accounted for 50% of the variance in relationship satisfaction. In contrast to H₇, these results indicate that the relationship between dispositional playfulness and relationship satisfaction was mediated by play.

Study 1 Discussion

Study 1 explored how everyday play behaviors with close friends were associated with the satisfaction of interpersonal needs (i.e., autonomy, competency, and relatedness) and with overall friendship satisfaction. In addition, I examined how play was associated with dispositional playfulness, how playfulness was associated with relationship satisfaction, and whether the direct effect of playfulness on relationship satisfaction was mediated by reported adult communicative play in the friendship.

Need satisfaction and relationship satisfaction. H₁ predicted that individuals who had their interpersonal needs of autonomy, competence, and relatedness satisfied by their close

friends were more satisfied with that friendship. Close friendships are almost certainly satisfying, which was evident in this study by the high reported mean for satisfaction (i.e., $M = 7.98$, see Table 1). Previous research (Demir & Davidson, 2013; Gillespie et al., 2015) found that satisfaction of SDT needs is positively associated with relationship satisfaction in the context of close friendships, and the findings in Study 1 were consistent with those findings. The correlations between satisfaction of autonomy, competence, and relatedness needs and overall satisfaction with one's friendship were significant.

Play and need satisfaction. H_2 predicted that friends who play more also report greater need satisfaction in their close friendships. Although previous work had indicated connections between satisfaction of interpersonal needs and the continued desire to play online games (Radel, Pelletier, Sarrazin, & Baxter, 2014; Ryan, Rigby, & Przybylski, 2006; Sheldon & Filak, 2008), the connection between adult communicative play and satisfaction of interpersonal needs had not been previously examined. As the results indicated, play is significantly correlated with satisfaction of each of the interpersonal needs. This study is the first to explicitly make the connection between adult communicative play and interpersonal needs, and it also suggests that play does something more than just adding fun to close friendships.

Play and relationship satisfaction: H_3 predicted that friends who play more are more satisfied with their friendships. In her seminal study on the impact of play in close relationships, Baxter (1992) found that play was associated with relational closeness in both romantic and platonic relationships, and Aune and Wong (2012), using a measure of play modified from Baxter, found that play was predictive of relational satisfaction in close friendships. The results of this project, using yet a third operationalization of play, similarly indicated that adult communicative play is positively associated with relationship satisfaction in close friendships.

Mediation of the relationship between adult communicative play and relationship satisfaction by interpersonal need satisfaction. One of the more novel contributions of Study 1 pertains to H₄ which predicted that the relationship between adult communicative play and relationship satisfaction is mediated by interpersonal need satisfaction. Both play and interpersonal need satisfaction were correlated with relationship satisfaction in close friends; however, results of the path analysis shown in Figure 3 indicated that the direct effect of play on satisfaction in close friends was mediated by the satisfaction of each of the interpersonal needs. Some of the effect that play has on relationship satisfaction of close friendships is channeled through satisfying interpersonal needs. This suggests that play is more than just fun and functions beyond simply fostering enjoyment within close friendships. The data from this study are consistent with the possibility that play functions as a means of satisfying interpersonal needs, thereby contributing to more satisfying friendships.

Play and playfulness. H₅ predicted that dispositional playfulness would be positively associated with adult communicative play in close friendships. This is consistent with Proyer's (2017) findings that dispositional playfulness is positively correlated with play, although in the present study the correlation is somewhat larger ($r = .54$) than that reported by Proyer ($r = .38$). His findings accounted for 14% of the variance, whereas the results of Study 1 accounted for 29% of the variance. One potential explanation for the difference in variance is that Proyer's instrument elicited responses about an individual's play behaviors "in the past 24 hours," whereas the present study asked friends to report on typical instance of play with a partner in a friendship.

Playfulness and Satisfaction. H₆ predicted that playful individuals would be more satisfied with their close friendships. The results indicated a positive association between these

constructs. The results of the present study are in keeping with Proyer's (2014) findings that dispositional playfulness is positively correlated with relationship satisfaction in general and, more to the present point, demonstrates the applicability of this association in the context of close friendships. This means that the more playful close friends are, the more likely they are to be satisfied in their relationships.

Mediation of the relationship between dispositional playfulness and relationship satisfaction by adult communicative play. H₇ predicted that the association between playfulness and relationship satisfaction of close friends would be mediated by play. Although playfulness significantly predicted relationship satisfaction while ignoring any mediators (see above), the association between playfulness and relationship satisfaction became non-significant ($\beta = -.06$) when play was added as a mediator. In contrast to H₇, the results indicated that the relationship between dispositional playfulness and relationship satisfaction was fully mediated by adult communicative play. This, perhaps surprising, result suggests that the process by which playful people become satisfied in their close friendships is through manifested play with their close friend.

CHAPTER 3. STUDY 2: DYADS

As previously discussed (see Chapter 1), playfulness is related to relationship satisfaction in adult friendships (Baxter, 1992; Proyer, 2014), as it is in romantic relationships (Aune & Wong, 2002; Baxter, 1992; Lutz, 1982). Playfulness is generally thought to be a positive disposition related to other prosocial traits like extroversion and agreeableness (Proyer, 2012)—traits associated with friendship satisfaction (Wilson, Harris, & Vazire, 2015) and quality of friendships (Demir & Weitekamp, 2007). The results of Study 1 (see Chapter 2) indicated that dispositional playfulness was positively associated with relationship satisfaction for individuals in close friendships, yet the direct effect of playfulness on relationship satisfaction was mediated by play.

Although these findings help explain the association between playfulness and satisfaction for individuals in close friendships, it is not yet known how the dispositional playfulness of one friend is associated with the relationship satisfaction of his or her partner. Playfulness is a desired trait of partners in long-term romantic relationships (Proyer & Wagner, 2015), and it seems likely that adults would also desire playfulness as a trait of their close friends. People, then, who are in friendships with playful people should be more satisfied with their relationships. Given these conceptual frameworks and these findings, the following hypothesis is proposed:

H_{8a}: In close friendships, the dispositional playfulness of one partner is positively associated with the relationship satisfaction of the other partner.

Beyond relationship satisfaction, a person's dispositional playfulness is also positively related to his or her own amount of reported play (see Study 1), and Proyer (2017) found similar results for the relationship between dispositional playfulness (SMAP) and play behaviors for

individuals. What is not yet known is whether one friend's dispositional playfulness is related to the amount of play reported by his or her partner in a close friendship.

Although the positive association between one friend's playfulness and his or her partner's reporting of play may seem self-evident, empirical evidence for this relationship is lacking. This relationship should be expected, however, because one person's playfulness should catalyze playful interactions between friends. In this study, friends report on the play that they typically engage in "together" with their friends. If respondents are accurate about their playfulness and playfulness manifests in play behavior, then people should report more play when their friends report being more playful. Thus, the following hypothesis is proposed:

H_{8b}: In close friendships, the dispositional playfulness of one partner is positively associated with the amount of reported play of the other partner.

Finally, although results from Study 1 revealed that reported play is associated with relationship satisfaction in close friendships for individuals ($\beta = .13$; see figure 3), it is not yet known whether the reported play of one friend is associated with the relationship satisfaction of his or her partner. As expressed above, respondents in this project noted the amount of play they typically engage in with their friends. A play-filled friendship should be satisfying for both partners. It should be expected, then, that the play reported by one friend may be related to the relationship satisfaction of the other partner in a close friendship. Given this, the following hypothesis is advanced:

H_{8c}: In close friendships, the reported play of one partner is positively associated with the relationship satisfaction of the other partner.

Study 2 Methods

Although Study 1 explored the associations of adult communicative play, interpersonal need satisfaction, relationship satisfaction, and dispositional playfulness in close friendships, the data were limited to responses from individuals. Study 2 extended the observations of Study 1 by including dyadic data. In Study 2, pairs of close friends completed contemporaneous surveys using the measures from Study 1 to explore how the responses of one partner in a close friendship were related to the responses of their partner.

Participants. For Study 2, students taking communication courses were recruited through the Research Participation System of the Lamb School of Communication at Purdue University and told to bring a non-romantic, same-sex, close friend to the lab to complete a survey. Student participants received extra credit through the Research Participation System; friends accompanying the original participants had an option of putting their name into a raffle for a \$50 Amazon gift card. The total sample was 326 participants (i.e., 163 close friend dyads). Four of the respondents did not answer a “comprehension item” correctly, so data from the four corresponding dyads were removed. The final sample was 318 (i.e., 159 dyads).

Age. Respondents ranged in age from eighteen to fifty-two years old ($M = 20.59$ years).

Sex. The majority of participants were female at 72% ($n = 229$) and 27.4% male ($n = 87$). Two participants identified as “other/prefer not to answer.”

Race. Regarding race, 58.5% of the sample was white ($n = 186$), 7.5% were Hispanic or Latino ($n = 24$), 1.6% were black ($n = 5$), 29.2% were Asian or Pacific Islander ($n = 93$), and 3.1% were other ($n = 10$).

Education. Regarding education, the sample was largely drawn from university students, and 78.9% ($n = 251$) reported “some college” or less. The next largest group was 16.4% with a bachelor’s degree ($n = 52$).

Relationship status. Almost everyone ($n = 307$, 96.5%) in the sample reported being unmarried/single.

Religion. Frequencies of religious association for participants are displayed in Table 4.

Friend type. Participants were asked to label their relationship with the friend they would discuss in this study. Of the respondents, 13.8% listed their friend as a “best friend” ($n = 44$), 52.5% listed their friend as “one of my best friends” ($n = 167$), and 23% labeled their friend as a “close friend” ($n = 73$).

Table 4

Frequencies of Religious Association for Study 2

	<i>N</i>	Percent
Protestant	96	30.2
Roman Catholic	77	24.2
Orthodox	1	.3
Jewish	1	.3
Muslim	5	1.6
Hindu	15	4.7
Atheist	18	5.7
Agnostic	21	6.6
Nothing in particular	70	22.0
Something else	14	4.4

Friendship length. In addition, respondents were asked to indicate how many years they had known their close friend. Years of friendship ranged from 0 to 19 years ($M = 2.48$ years).

Study 2 Procedure

Data collection for this study took place in the research lab at the Lamb School of Communication at Purdue University. The survey was presented via Qualtrics, and the procedures were approved by the IRB of Purdue University. Participants were initially informed

that the survey involved their relationship with a close, same-sex, non-romantic friend, and to participate, they must bring a close friend with them to the lab to take the surveys together. After signing the research participation consent form, close friend dyads were assigned a dyad number and set up at a computer to take the survey. Each participant was asked to answer a series of general demographic questions regarding age, race, education, marital status, friendship status, and years of friendship (see above). Participants were then asked to fill out measures of need satisfaction, adult communicative play, and relationship satisfaction. After the survey was completed, participants were thanked for participation.

Study 2 Measures

The measures for Study 2 were the same as those in Study 1.

Study 2 Analysis

First, in order to replicate the results from Study 1, associations were examined using AMOS 24 for a path model analysis with data from individuals on measures of playfulness, adult communicative play, relationship satisfaction, and interpersonal needs.

Second, H_{8a} and H_{8c} predicted that in close friendships measures of adult communicative play and dispositional playfulness would be associated with the relationship satisfaction of one's partner, and H_{8b} predicted that the dispositional playfulness of one friend would be associated with the reported play of the other. Because Study 2 collected data from pairs of close friends, correlations between responses were expected. Results indicated that the intraclass correlations (ICC) for dispositional playfulness (ICC = .09), play (ICC = .39), satisfaction (ICC = .49) of dyads were not close to zero (ICC > .05), so the data from close friend pairs should be treated as nonindependent. This warranted analysis with a method that could account for the nonindependence of the data. It should also be noted that close friend dyads in Study 2 were

same-sex, non-romantic partners, so the assigned roles of “Partner 1” and “Partner 2” were arbitrary. Designations of “Partner 1” and “Partner 2” were assigned randomly.

For the sake of analysis, dyad partners were treated as indistinguishable.

“Distinguishable” pairs refer to partnerships with defined roles like husband and wife or employer and employee. For distinguishable pairs, scores on and associations between measures for partners can be different from each other. For example, a wife’s reporting of play may affect her husband’s satisfaction differently than a husband’s reporting of play affects his wife’s satisfaction. In this study, however, partners in close friend dyads have no defined roles and are completely interchangeable (i.e., indistinguishable), so scores on and associations between measures for both Partner 1 and Partner 2 are treated as equal.

To explore how partner scores were related to each other in close friend dyads, an actor-partner interdependence model (APIM; Cook & Kenny, 2005) for indistinguishable pairs (Kenny, Kashy, & Cook, 2006) was created and tested using AMOS 24. To construct an APIM for indistinguishable pairs, means and variances were constrained to be equal for both partners on mirrored paths and variables. This APIM followed the lower mediation path of Figure 4 (i.e., dispositional playfulness to relationship satisfaction by adult communicative play) and extended it by including both partners’ scores on each measure.

Study 2 Results

Power. The sample consisted of 318 respondents (i.e., 159 dyads). To account for potential interdependence, the replication portion of Study 2 was conducted using data from Partner 1 and Partner 2 separately ($N = 159$ each), for which a post hoc analysis revealed a power of .72 to detect significance ($p = .05$) for two-tailed correlations of $r = .20$. The second part of Study 2 (i.e., H_{8a} , H_{8b} , and H_{8c}) compared data between close friends in the dyad through path

model analyses of the APIM; with this sample ($N = 159$), the study achieved a power of .77 to detect significance ($p = .01$) for correlations of $r = .26$ or higher. Means, standard deviations, and reliability of measures are shown in Table 5. Zero-order correlations are shown in Table 6.

Table 5

Summary of Means, Standard Deviations, Skewness, Kurtosis, and Reliability for Independent and Dependent Variables in Study 2 for Partners 1 and 2

	<i>M</i>	<i>SD</i>	<i>Sk</i>	<i>Ku</i>	α
Partner 1					
Adult Communicative Play	14.16	3.47	-.81	-.07	.81
Autonomy	6.31	.75	-1.25	2.03	.75
Competence	5.87	.96	-.91	.68	.70
Relatedness	5.62	1.08	-.68	.20	.59
Playfulness	5.45	1.02	-.83	.80	.85
Satisfaction	8.29	.79	-1.13	.79	.93
Partner 2					
Adult Communicative Play	13.75	4.05	-1.07	0.77	.86
Autonomy	6.21	0.86	-1.27	1.73	.63
Competence	5.77	1.07	-1.02	0.93	.76
Relatedness	5.46	1.23	-0.81	0.06	.69
Playfulness	5.46	1.02	-0.82	1.06	.84
Satisfaction	8.27	0.92	-1.73	3.45	.94

Table 6

Summary of Zero-Order Correlations in Study 2 for Partners 1 and 2

	Play1	Play2	Auto1	Auto2	Comp2	Comp1	Rel1	Rel2	Playful1	Playful2	Sat1
Play2	.40**										
Auto1	.25**	.10									
Auto2	.25**	.38**	.18*								
Comp2	.24**	.31**	.23**	.61**							
Comp1	.19*	.14	.54**	.18*	.21**						
Rel1	.38**	.22**	.49**	.14	.20*	.44**					
Rel2	.31**	.43**	.26**	.51**	.39**	.24**	.30**				
Playful1	.38**	.27**	.18*	.12	.04	.10	.07	.18*			
Playful2	.30**	.53**	.07	.27**	.32**	.13	.11	.13	.09		
Sat1	.37**	.32**	.57**	.33**	.39**	.42**	.46**	.34**	.16*	.14	
Sat2	.22**	.37**	.26**	.52**	.46**	.26**	.33**	.65**	.09	.11	.49**

Note. $df = 157$, * $p < .05$. ** $p < .01$.

Replication of Study 1 results. The replication models of Study 2 (see Figures 4 and 5) produced poor results regarding model fit for both Partner 1: $\chi^2(3, N = 159) = 7.8, p = .05$; RMSEA = .10, CI 90% [.003, .19]; CFI = .98, TLI = .89; and Partner 2: $\chi^2(3, N = 159) = 12.92, p = .005$; RMSEA = .15, CI 90% [.07, .23]; CFI = .97, TLI = .84. Because of the poor model fit, Study 2 was unable to replicate the findings with the same path model as Study 1. Further exploration of the relationships present in the model were required to achieve model fit.

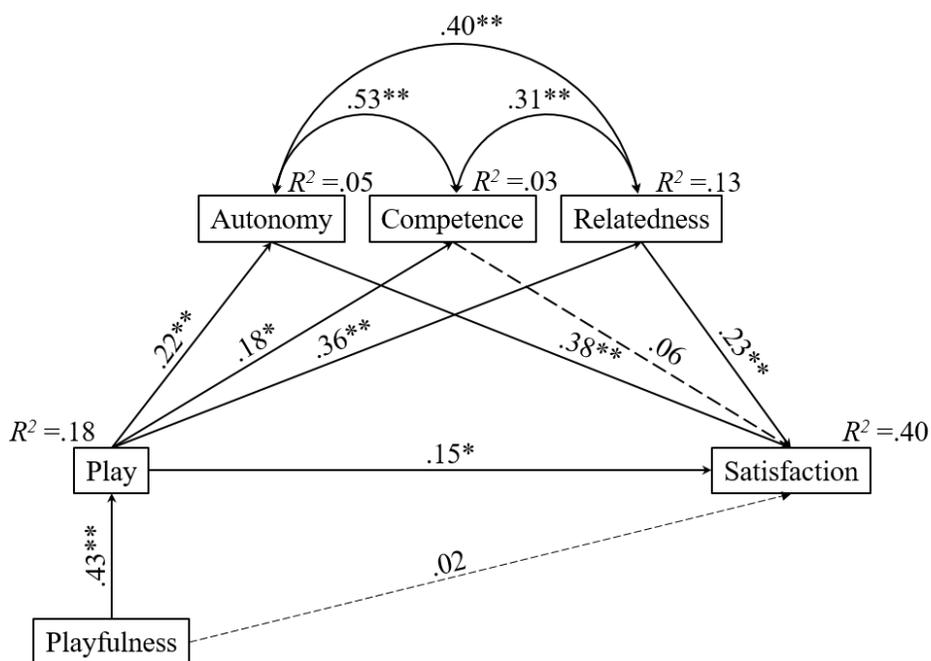


Figure 4. Standardized regression weights of the path model for Partner 1 of Study 2: Relationships among adult communicative play, autonomy, competence, and relatedness needs satisfaction, relationship satisfaction, and playfulness. * $p < .05$. ** $p < .01$.

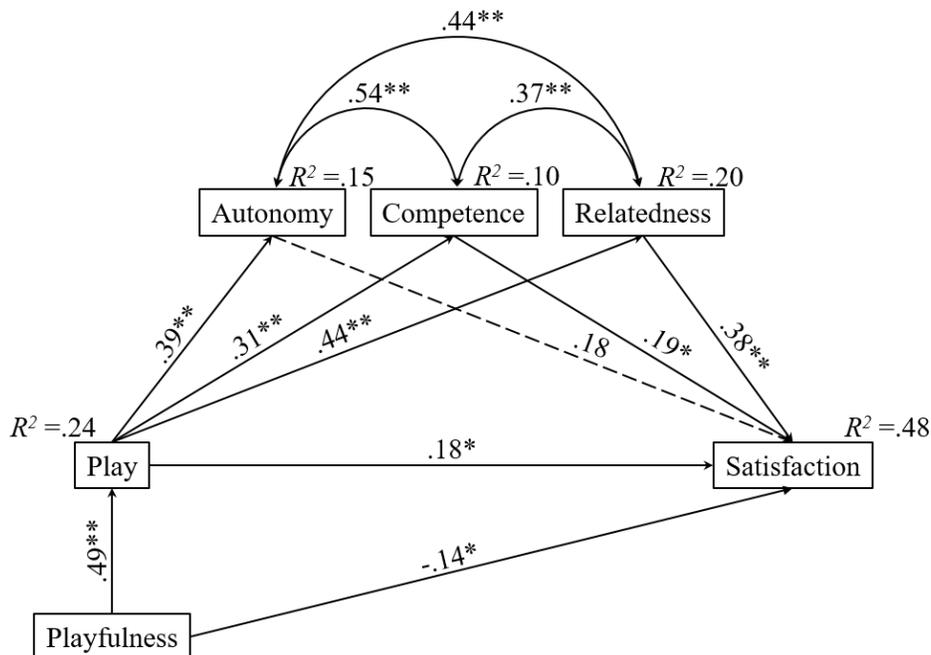


Figure 5. Standardized regression weights of the path model for Partner 2 of Study 2: Relationships among adult communicative play, autonomy, competence, and relatedness needs satisfaction, relationship satisfaction, and playfulness. * $p < .05$. ** $p < .01$.

Post hoc exploration for model fit. In order to achieve model fit, a post hoc exploration of the model was conducted. The insignificant association between “playfulness” and “satisfaction” of Study 1 (see Figure 3) was dropped, and paths between “playfulness” and the three interpersonal need satisfaction variables (i.e., autonomy, competence, and relatedness) were included. The correlation matrix for Study 2 indicated that these relationships were significant, thus warranting their inclusion in the model for this post hoc exploration (see Table XX). These new models (see Figures 6 and 7) indicated good model fit for Partner 1: $\chi^2(1, N = 159) = .06, p = .81$; RMSEA = .00, CI 90% [.00, .13]; CFI = 1.00, TLI = 1.00; however, not for Partner 2: $\chi^2(1, N = 159) = 4.12, p = .04$; RMSEA = .14, CI 90% [.02, .29]; CFI = .99, TLI = .85.⁵

⁵ Further analysis using Mahalanobis distance revealed a discrepancy in the number of outliers between the two samples (Partner 1 sample had 5; Partner 2 sample had 18). When the outliers were removed, both models indicated good model fit: Partner 1: $\chi^2(1, N = 154) = 1.4, p = 2.42$; RMSEA = .05, CI 90% [.00, .23]; CFI = 1.00, TLI = .97; Partner 2: $\chi^2(1, N = 142) = .06, p = .80$; RMSEA = .00, CI 90% [.00, .14]; CFI = 1.00, TLI = 1.05.

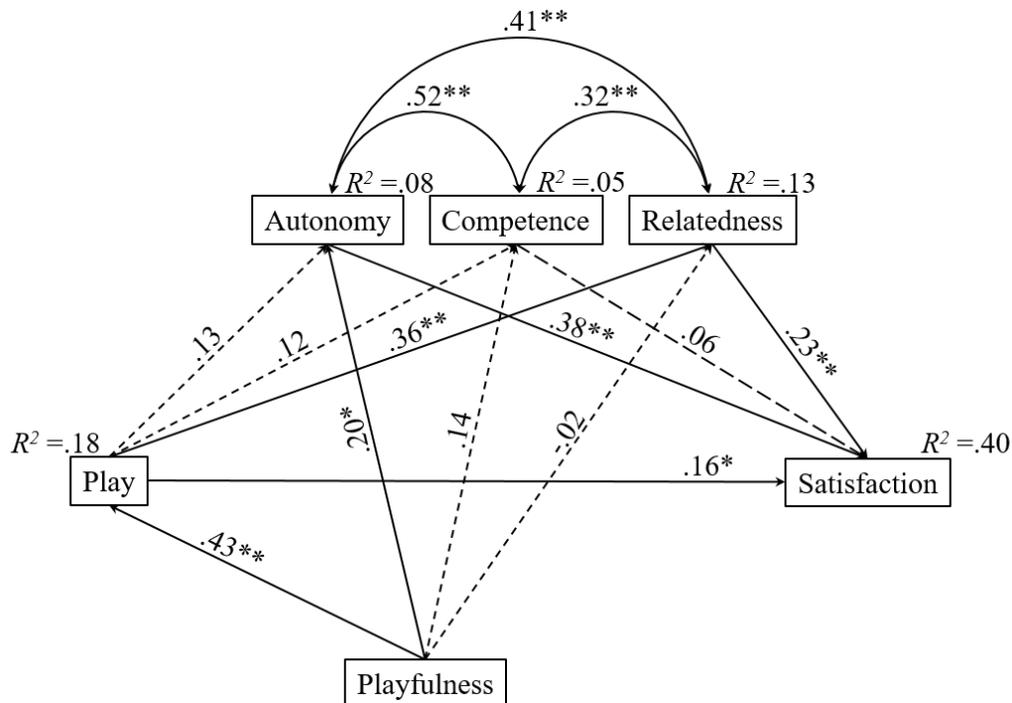


Figure 6. Standardized regression weights of the post hoc alternative path model for Partner 1 of Study 2: Relationships among adult communicative play, autonomy, competence, and relatedness needs satisfaction, relationship satisfaction, and playfulness. * $p < .05$. ** $p < .01$.

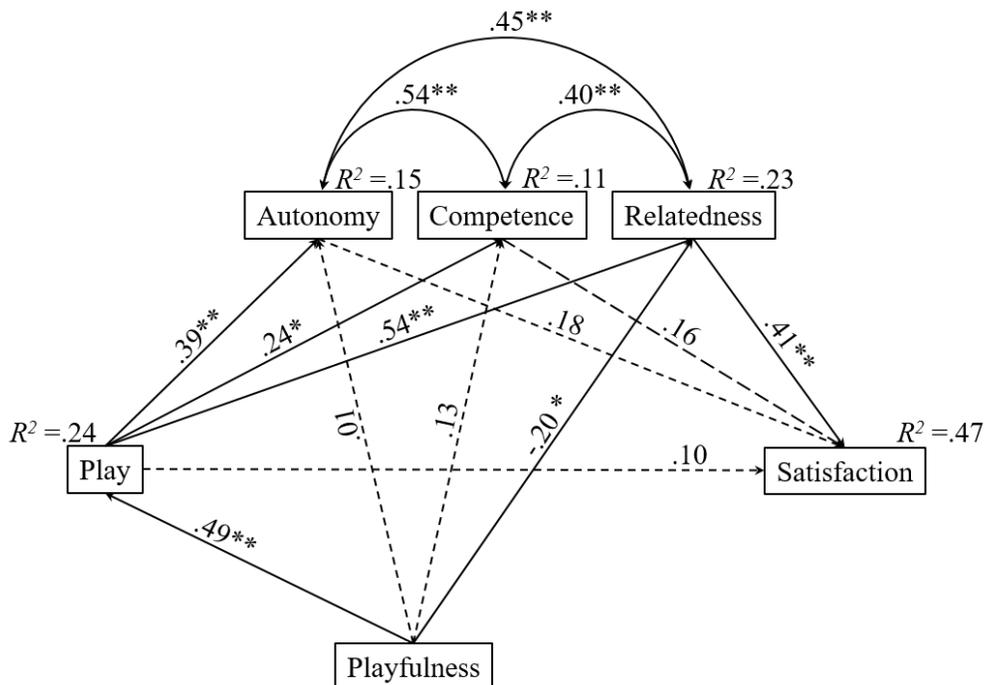


Figure 7. Standardized regression weights of the post hoc alternative path model for Partner 2 of Study 2: Relationships among adult communicative play, autonomy, competence, and relatedness needs satisfaction, relationship satisfaction, and playfulness. * $p < .05$. ** $p < .01$.

Close friendships at the dyadic level. Beyond the replication effort of Study 1, Study 2 explored whether one friend's responses affected his or her partner's satisfaction (H_{8a} and H_{8c}) and reported play (H_{8b}). The descriptive statistics for partners' scores on each measure are presented in Table 6. To test hypotheses H_{8a} , H_{8b} , and H_{8c} , APIM analyses were conducted (see Table 7). The indices of fit for the APIM indicated good model fit: $\chi^2(12, N = 159) = 12.93, p = .374$; RMSEA = .02, CI 90% [.00, .09]; CFI = .99, TLI = .99 (see Figure 8).

Table 7

Coefficients (Unstandardized and Standardized), Standard Errors, Critical Ratios, Confidence Intervals, and Significance Levels of Paths in the APIM for Study 2

			90% CI						
			<i>B</i>	S.E.	C.R.	β	Lower	Upper	<i>p</i>
Play (Partner 1)	←	Playfulness (Partner 1)	1.64	0.18	9.23	0.44	0.35	0.54	0.01**
Play (Partner 2)	←	Playfulness (Partner 2)	1.64	0.18	9.23	0.44	0.35	0.54	0.01**
Play (Partner 1)	←	Playfulness (Partner 2)	0.91	0.18	5.12	0.25	0.14	0.34	0.01**
Play (Partner 2)	←	Playfulness (Partner 1)	0.91	0.18	5.12	0.25	0.14	0.34	0.01**
Satisfaction (Partner 2)	←	Play (Partner 2)	0.08	0.01	6.05	0.36	0.21	0.50	0.01**
Satisfaction (Partner 1)	←	Play (Partner 1)	0.08	0.01	6.05	0.36	0.21	0.50	0.01**
Satisfaction (Partner 1)	←	Play (Partner 2)	0.04	0.01	3.02	0.18	0.06	0.29	0.01**
Satisfaction (Partner 2)	←	Play (Partner 1)	0.04	0.01	3.02	0.18	0.06	0.29	0.01**
Satisfaction (Partner 2)	←	Playfulness (Partner 2)	-0.07	0.05	-1.27	-0.08	-0.21	0.06	0.26
Satisfaction (Partner 1)	←	Playfulness (Partner 1)	-0.07	0.05	-1.27	-0.08	-0.21	0.06	0.26
Satisfaction (Partner 2)	←	Playfulness (Partner 1)	-0.05	0.05	-1.01	-0.06	-0.18	0.07	0.28
Satisfaction (Partner 1)	←	Playfulness (Partner 2)	-0.05	0.05	-1.01	-0.06	-0.18	0.07	0.28

Note. * $p < .05$. ** $p < .01$.

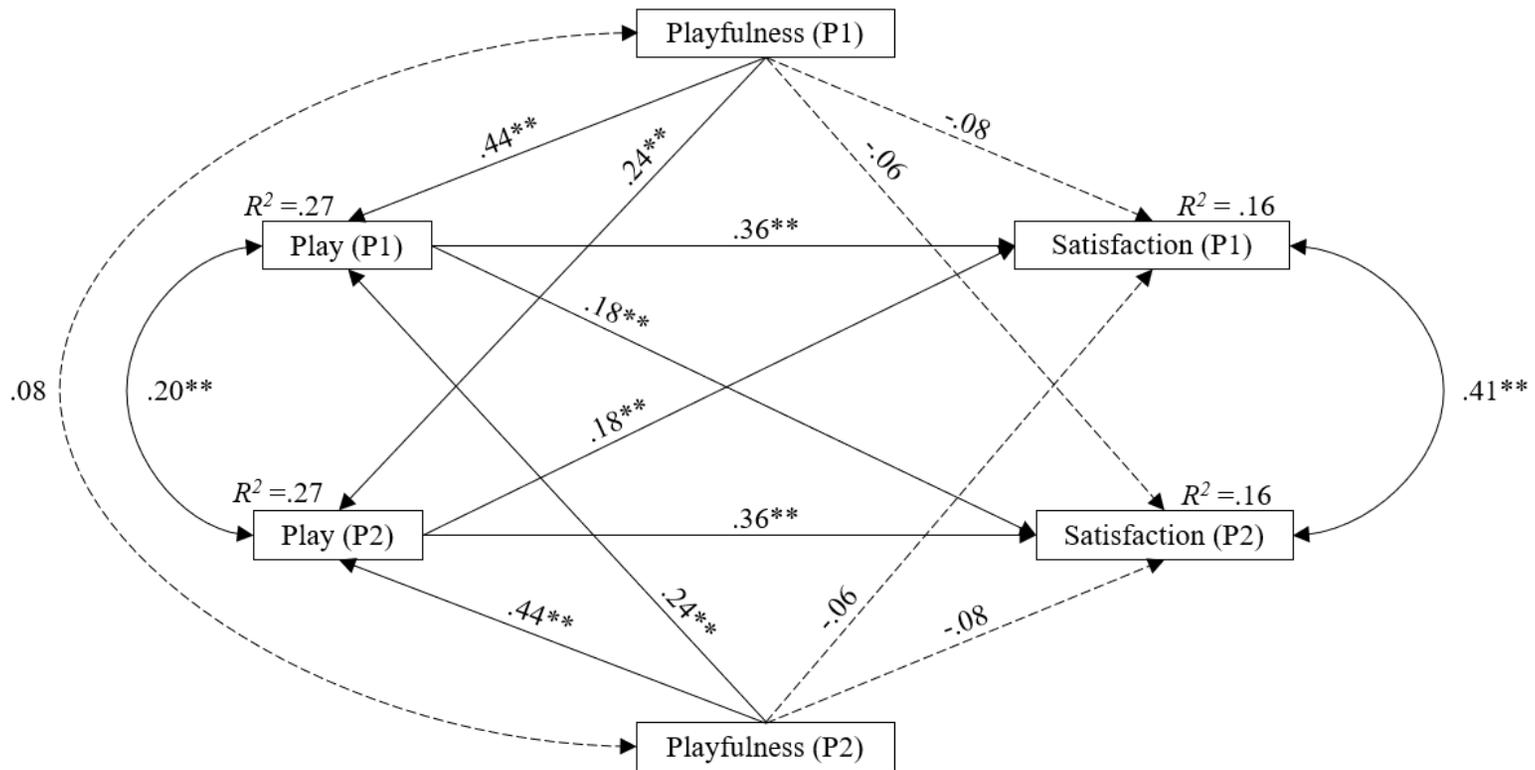


Figure 8. Standardized regression weights of the actor-partner interdependence model for indistinguishable pairs for Study 2: Relationships between partners on playfulness, adult communicative play, and relationship satisfaction. * $p < .05$. ** $p < .01$.

Dispositional playfulness and relationship satisfaction between friends. H_{8a} predicted that the dispositional playfulness of one partner in a close friendship would be positively associated with the relationship satisfaction of the other partner. Excluding play as a mediator, the results of the path analyses revealed significant actor effects between dispositional playfulness and relationship satisfaction (i.e., Partner 1's dispositional playfulness is associated with Partner 1's relationship satisfaction), $\beta = .12, p = .023, CI [.10, .24]$, and significant partner effects, $\beta = .11, p = .02, CI [.01, .21]$. Excluding play as a mediator, this model accounted for 3% of the variance in relationship satisfaction. Similar to the findings of Study 1, when play was included as a mediator, the direct effect became insignificant for both paths: actor effects, $\beta = -.08, p = .26, CI [-.21, .06]$, and partner effects, $\beta = -.06, p = .28, CI [-.18, .07]$. Simply put, playfulness of both partners predicts relationship satisfaction of both partners, but only when excluding play as a mediator. H_{8a} is partially supported.

Dispositional playfulness and reported play between friends. H_{8b} predicted that the dispositional playfulness of one partner in a close friendship would be positively associated with the amount of reported play of the other partner. Consistent with the findings of Study 1 and the post hoc alternative path models of Study 2, the path analyses revealed significant actor effects between dispositional playfulness and reported play, $\beta = .44, p = .01, CI [.35, .54]$. Although smaller than the actor effects, path analyses also revealed significant partner effects, $\beta = .25, p = .01, CI [.14, .34]$. Simply put, Partner 1's dispositional playfulness was positively associated with Partner 2's reported play. The path model accounted for 27% of the variance in reported play of friends. H_{8b} is supported.

Reported play and relationship satisfaction between friends. H_{8c} predicted that the reported play of one friend would be related to the satisfaction of the other. Again, consistent

with the results of Study 1, path analyses revealed significant actor effects between reported play and relationship satisfaction, $\beta = .36, p = .01, CI [.21, .50]$. Path analyses revealed a smaller, yet still significant, partner effect between play and satisfaction, $\beta = .18, p = .01, CI [.06, .29]$. In other words, Partner 1's reported play was positively associated with the relationship satisfaction of Partner 2. The path model accounted for 16% of the variance in relationship satisfaction. H_{8c} is supported.

Study 2 Discussion

Replication of Study 1 results. The first purpose of Study 2 was to replicate the findings of Study 1. Because of poor model fit in Study 2 for Partners 1 and 2, replication analyses could not be conducted with the same model as Study 1. Instead, post hoc alternative path models were explored for both partners. Analysis of the data from Study 1 revealed several significant and positive associations between variables in the path model, as well as mediation. Some of the significant associations found by the path model analysis of Study 1 (see Figure 3; see also, Table 3) were similar to the findings of the new Study 2 models (see Figures 6 and 7) and the APIM (see Figure 8; see also, Table 7).

Interpersonal need satisfaction predicts relationship satisfaction in close friendships.

H_1 predicted that interpersonal need satisfaction would predict relationship satisfaction for close friends. Findings from the path analyses indicated significant associations between relationship satisfaction and interpersonal need satisfaction in Study 1 (autonomy, $\beta = .35, p = .002$; competence, $\beta = .23, p = .002$; relatedness, $\beta = .23, p = .002$). Analysis of the alternative path model for Partner 1 in Study 2 revealed significant associations for two of the three needs (autonomy, $\beta = .38, p = .01$; relatedness, $\beta = .24, p = .01$) and one for Partner 2 (relatedness, $\beta = .41, p = .01$).

These findings were consistent with previous research on similar concepts and other relational contexts: Hadden, Smith, and Knee (2013) with romantic partners, Demir and Davidson (2013) with SDT needs and happiness, and Patrick et al. (2007) with need fulfillment of romantic partners and SDT needs. That people find friendships more satisfying when their interpersonal needs are met in them is to be expected. Study 1 provided support for the association of all three needs in the context of close friendships; however, Study 2 only provided support for the association between relatedness need satisfaction and relationship satisfaction across both alternative models.

Adult communicative play predicts interpersonal need satisfaction in close friendships.

H_{2a}, H_{2b}, and H_{2c} predicted that the level of reported adult communicative play would be associated with satisfaction of interpersonal needs. Results from the path analyses revealed significant and positive associations for all three needs in Study 1 (autonomy, $\beta = .20, p = .002$; competence, $\beta = .23, p = .002$; relatedness, $\beta = .23, p = .002$). Analysis of the alternative path model in Study 2 for Partner 1 revealed one significant association between play and relatedness ($\beta = .36, p = .002$), whereas all three were significant for Partner 2 (autonomy, $\beta = .39, p = .002$; competence, $\beta = .24, p = .037$; relatedness, $\beta = .54, p = .002$).

Study 1's model accounted for between 4-8% of the variance in interpersonal need satisfaction; Study 2's model for Partner 1 accounted for between 8-13% of the variance, and Partner 2's model account for between 11-23%. Previous research had found that satisfaction of SDT needs was related to a desire to keep playing an online game (Ryan et al., 2006), the potential for playing an online game again (Sheldon & Filak, 2008), and the desire to play a game again when need satisfaction was thwarted (Radel, Pelletier, Sarrazin, & Baxter, 2014). These findings extend previous research in that they a) explore the connection between relational

play and SDT needs, b) explore the association of need satisfaction with adult communicative play, c) examine these variables in the context of adult close friendships, and d) place this in context of an overarching model of these variables as they relate to relationship satisfaction.

Adult communicative play predicts relationship satisfaction in close friendships. H₃ predicted that adult communicative play would be positively associated with relationship satisfaction for close friends. Path analyses indicated a positive and significant relationship even after including mediators in Study 1 ($\beta = .13, p = .002$) and for Partner 1 of Study 2 ($\beta = .16, p = .05$). The results from the APIM revealed a significant effect for both actor ($\beta = .36, p = .01$) and partner ($\beta = .18, p = .01$). “My” account of play in the relationship is not only significantly associated with “my” satisfaction, but “yours” as well. It should be noted, however, that results from the alternative path analysis for Partner 2 did not reveal a significant association between play and relationship satisfaction.

Previous research, using a measure of communicative play based on frequencies of particular play behaviors, found associations for friends between play and relational closeness (Baxter, 1992) and play and relationship satisfaction (Aune & Wong, 2012). However, the results from the APIM did indicate a similar positive association between reported play and relationship satisfaction for close friends.

Studies 1 and 2 utilized a measure of communicative play that assessed the presence or absence of particular communicative play behaviors typical in the friendship; this measure was devised from Proyer’s (2017) list of everyday play behaviors. The associations found in Studies 1 and 2 were not as strong as those found by Aune and Wong; however, the measures were different, and the present studies included SDT needs satisfaction as mediators. The findings of

the present project contribute to the literature by exploring the close friend context and placing the relationship in a path model with SDT needs as mediators.

The mediating effects of interpersonal need satisfaction in close friendships. Further exploring the relationship between play and satisfaction, H₄ predicted that the association between adult communicative play and relationship satisfaction would be mediated by interpersonal need satisfaction. Studies 1 and 2 found that when interpersonal needs were added to the model as mediators, the direct effect between play and satisfaction decreased. The effect remained significant in Study 1 and for Partner 2 of Study 2, but not for Partner 1.

In Study 1, the direct effect without mediators between play and satisfaction was $\beta = .29$, $p = .002$, $R^2 = .08$, and with mediators added the effect was $\beta = .13$, $p = .003$, $R^2 = .50$. In Study 2 for Partner 1, the direct effect without mediators between play and satisfaction was $\beta = .33$, $p = .002$, $R^2 = .11$, and for Partner 2, the direct effect without mediators between play and satisfaction was $\beta = .40$, $p = .002$, $R^2 = .16$. With mediators added, the effect for Partner 1 was $\beta = .16$, $p = .05$, $R^2 = .40$, and the effect for Partner 2 was $\beta = .10$, $p = .22$, $R^2 = .40$. In Study 1, all three interpersonal needs were significant mediators; in Study 2 for Partner 1, only autonomy and relatedness were significantly related to satisfaction, and for Partner 2, only the association between relatedness and satisfaction was significant.

Dispositional playfulness predicts adult communicative play in close friendships. H₅ predicted that dispositional playfulness would be positively associated with adult communicative play. Results from Study 1 revealed that playfulness was significantly associated with play in the path model, $\beta = .54$, $p = .002$, $R^2 = .29$. This association accounted for 29% of the variance in play. Both alternative models in Study 2 found a similar association: Partner 1 ($\beta = .43$, $p = .01$, $R^2 = .18$) and Partner 2 ($\beta = .49$, $p = .01$, $R^2 = .24$). Results from the APIM indicated a similar

association to Study 2 for actor effects, $\beta = .44$, $p = .01$, and a still significant, but smaller, association for partner effects, $\beta = .24$, $p = .01$. Playfulness is associated with a partner's own accounting of play in the friendship and with his or her partner's accounting of play in the relationship.

A few previous studies have explored and found associations between playfulness and play in adult friends (Baxter, 1992; Proyer, 2017). Proyer, using the same measure of playfulness as the present study (SMAP) and a similar version of the play scale, found a significant correlation, albeit slightly smaller, between the playfulness and play for his undergraduate student sample, $r = .38$, $p < .001$, accounting for 14% of the variance. The present studies also found significant correlations, accounting for 18-29% of the variance. As noted previously, Proyer's recorded responses about individual instances of play, and the present study inquired about instances of play with a friend. These findings replicate his findings and extend them by including partner effects between playfulness and play.

Dispositional playfulness (without mediators) predicts relationship satisfaction in close friendships. H_6 predicted that dispositional playfulness would be positively related to relationship satisfaction with close friends. Without considering any mediators, Study 1 found that dispositional playfulness was related to play, $\beta = .21$, $p = .002$, $R^2 = .04$. The APIM, ignoring any mediators, produced significant actor effects between playfulness and satisfaction, $\beta = .12$, $p = .023$, and for partner effects, $\beta = .11$, $p = .02$. These associations in the path model accounted for 3% of the variance in relationship satisfaction for either friend in the dyad. Study 2 dropped this path in the post hoc alternative models in order to achieve model fit, so no comparisons can be made.

Previous research had found associations between playfulness and relationship satisfaction; Aune and Wong (2002), using a different measure of playfulness than the present study, found a significant and large correlation between playfulness and relationship satisfaction of friends, $r = .55$. Proyer (2014), using SMAP, found correlations in two subsequent studies for “significant relationships” much closer to the findings of Study 1, Study 2, and the APIM: $r = .16$ and $r = .14$ respectively. The results of the APIM extend previous research (Aune & Wong; Proyer) by providing evidence for partner effects between playfulness and satisfaction.

The mediating effects of adult communicative play in close friendships. In Study 1, H₇ predicted that the effect of dispositional playfulness on relationship satisfaction would be mediated by adult communicative play. When play was introduced into the model in Study 1 and the APIM as a mediator, the significant association between playfulness and relationship satisfaction became insignificant. Playfulness was previously found to be associated with relationship satisfaction (Proyer, 2012) and reported play (Proyer, 2017); this study, however, examined how these three were associated with each other and whether the direct effect of playfulness on relationship satisfaction was mediated by reported play. These results extend Proyer’s findings by revealing that the effect of playfulness on satisfaction was fully mediated by reported play of close friends.

Data for friend pairs. In addition to the replication of the findings of Study 1, Study 2 extended those findings by analyzing data from pairs of close friends. To explore the data from dyads, an APIM was created and tested on measures of dispositional playfulness, adult communicative play, and relationship satisfaction for both partners. The results from the APIM indicated that close friends potentially influence each other with regard to the associations of play and satisfaction, as well as playfulness and play. Overall, the actor effects were greater than

partner effects; Kenny et al. (2006) contended, however, that this is likely because partner effects are “socially transactional,”—a portion of the effect is “lost” in the interaction process itself. In this study, an individual’s playfulness was associated with his or her own account of play in the relationship, but also related to his or her friend’s account of play. In addition, an individual’s account of play in the relationship was associated with his or her own relationship satisfaction, as well as that of his or her friend. Some of this cross-association was expected because the instrument for measuring adult communicative play included items based on collective behaviors like “we playfully teased each other.”

Playfulness and relationship satisfaction between friends. H_{8a} predicted that the playfulness of Partner 1 would be associated with the relationship satisfaction of Partner 2 in a close friendship. Given previous findings on the association between playfulness and relational closeness of friends (Baxter, 1992) and playfulness and satisfaction (Proyer, 2012), as well as the positive associations found in Study 1 and 2 between playfulness and relationship satisfaction, partner effects were expected between dispositional playfulness and relationship satisfaction. The APIM did reveal partner effects for playfulness and satisfaction; however, these effects became insignificant in the presence of play as a mediator. As mentioned previously, in the APIM without play as a mediator, playfulness accounted for only 3% of the variance in relationship satisfaction for both friends. Playfulness of one friend has an effect on the satisfaction of the other friend, but the effect is small and fully mediated by play.

Playfulness and play between friends. H_{8b} predicted that the dispositional playfulness of Partner 1 would be associated with the play in the relationship reported by Partner 2. Results of the APIM revealed that a partner’s playfulness was significantly related to his or her friend’s accounting of play, and the model accounted for 27% of the variance in reported play of each

partner. The playfulness of close friends was not significantly correlated ($r = .08, p = .221$), but their reporting of play was ($r = .20, p = .04$), albeit, this relationship is small than might be expected. These findings lend credence and provide nuance to Greene and Pruim's (2018) assertion that dispositional playfulness "plays an essential role in fostering occasions of play" (p. 22). These results also extend Proyer's (2017) findings on the association of play and playfulness for individual friends by including data from dyads.

Play and relationship satisfaction between friends. H_{8c} predicted that the reported play of Partner 1 would be positively associated with the relationship satisfaction of Partner 2. The results of the APIM revealed significant actor effects between play and satisfaction ($\beta = .36, p < .01$) and significant partner effects ($\beta = .18, p < .01$), and the model accounted for 16% of the variance in relationship satisfaction between close friends. Friends' reporting of play, as noted above, is significantly correlated, and their scores on relationship satisfaction are even more so, $r = .41, p < .01$. The reporting of play by close friends was associated with each other's relationship satisfaction. These results extend the findings of Proyer (2017) by including partner effects.

CHAPTER 4. CONCLUSIONS

The purpose of this dissertation was to explore adult communicative play in the context of close friendships at individual and dyadic levels, particularly with attention to its relationships with dispositional playfulness, interpersonal need satisfaction, and relationship satisfaction. Various scholars (e.g., Bateson, 1956; Baxter, 1992; Betcher, 1981) have been interested in the subject of adult play, and in recent years, adult play has become the subject of more empirical research (e.g., Aune & Wong, 2002; 2012; Proyer 2012; 2014; 2017; Yarnal & Qian, 2011). As noted in Chapter 1, play has a host of benefits for individuals (e.g., Gordon, 2014; Terr, 1999; Winnicott, 1971) and for relationships (e.g., Baxter, 1987; Feeney & Lemay, 2012; Terr, 1999), and “quintessential” communicative play (see Greene & Pruim, 2018) between adults is tied to relational closeness (Baxter, 1992) and relational satisfaction (Aune & Wong, 2002; Proyer, 2017). This project sought to provide a more nuanced view on how play relates to relationship satisfaction for friends.

In order to accomplish this, Study 1 explored the relationships between and among adult communicative play, dispositional playfulness, interpersonal need satisfaction (i.e., autonomy, competence, and relatedness), and relationship satisfaction for individuals through an online survey. A path model was proposed to test these relationships and ascertain whether certain relationships were mediated. Study 2 aimed to replicate the results of Study 1 and extend its findings by examining data from pairs of close friends; the initial replication was not possible because of poor model fit, but post hoc alternative models were proposed and explored.

This project explored whether certain pairs of close friends were more satisfied than other pairs based on their reports of play and playfulness, and also whether certain close friends reported more play based on their reports of dispositional playfulness. Additional analyses were

conducted to investigate how partners' scores were associated with each other with regard to playfulness, play, and satisfaction. This chapter briefly summarizes the findings, discusses theoretical implications, explains limitations, and suggests future directions for research on the role of play in friendships.

Summary of Findings

The findings of Studies 1 and 2 revealed that the more people reported play in their relationships, the more satisfied with their friendships they were. Also, as reports of play in friendships increased, people reported more interpersonal need satisfaction in their friendships. Interpersonal need satisfaction was also positively associated with relationship satisfaction in friendships. Although reported play had a direct effect on relationship satisfaction in friendships, this effect decreased when interpersonal need satisfaction was included in the model as a mediator. The association between reported adult communicative play and relationship satisfaction between close friends, however, was still significant, indicating mediation.

Furthermore, analysis of the data from Studies 1 and 2 indicated that a person's dispositional playfulness was related to his or her satisfaction with the close friendship without any mediators. Even more, a person's dispositional playfulness was associated with his or her reported adult communicative play with his or her friend. The direct effect of playfulness on relationship satisfaction was fully mediated by play, suggesting that playfulness affects relationship satisfaction in a friendship by being made manifest through instances of play.

Findings from the actor-partner interdependence model in Study 2 replicated a portion of the results from Studies 1 and 2, but also revealed other partner effects in close friendships. Analysis of the APIM indicated associations for individuals in close friendships between play and satisfaction, playfulness and play, playfulness and satisfaction, and the mediation of

playfulness on relationship satisfaction by adult communicative play. Beyond these associations for individuals (i.e., actor effects), the results indicated that one partner's reporting of play was associated with the other partner's relationship satisfaction, and also that one partner's dispositional playfulness was associated with the other partner's reporting of play in the relationship.

Implications

One of the original claims that gave rise to this project was that play in close friendships would be associated with interpersonal need satisfaction as described by SDT (i.e., autonomy, competence, and relatedness). Although a few studies had examined the impact of interpersonal need satisfaction on young adults' continued desire to play certain online games (e.g., Radel, Pelletier, Sarrazin, & Baxter, 2014; Ryan, Rigby, & Przybylski, 2006; Sheldon & Filak, 2008), the association between interpersonal need satisfaction and reported play had not yet been explored in close adult friendships. The results of Studies 1 and 2 indicated that reported play in close friendships was associated with the satisfaction of all three interpersonal needs. The first implication of this project, then, is that interpersonal need satisfaction is an important consideration when exploring play in close friendships. Adults who report more play with their close friends also report that their autonomy, competence, and relatedness needs are more fully met in those friendships. Play is not only associated with general relationship satisfaction, but play meets other needs in the relationship, as well.

A second implication is that partner effects should be considered when exploring the effect of play on outcomes like relational satisfaction in close friendships. The call for more dyadic research is certainly not new (see Kenny et al., 2006); however, it is an important reminder that studying interpersonal communication at the dyadic level provides a closer

approximation of the interpersonal dynamics at play. In the present study, the relationship between play and satisfaction (for example) found in Study 1 and Study 2 were not only significant for individuals (i.e., actor effects), but also for their friends (i.e., partner effects). Through these findings, a picture of friendship emerges in which the intrinsically rewarding, message-based interactions between friends manifests in greater relationship satisfaction for both partners.

A third implication of the present findings is that mediators should be considered when exploring the association of dispositional playfulness and relationship satisfaction, specifically the mediating effect of reported play. Although previous research (Aune & Wong, 2002; Proyer, 2012; 2014) found that playfulness was associated with relationship satisfaction, the findings of this present project revealed that the association between playfulness and relationship satisfaction was fully mediated by reported instances of play. These results were indicated by Study 1, replicated by Study 2, and supported by the results of the APIM.

As noted previously (see Chapter 1), play is the manifestation of playfulness, and these results provide evidence that this is the case. The three path models examined in the present project, specifically the relationship between playfulness and play, accounted for 21-29% of the variance in play scores. Beyond play, playfulness may also manifest itself in the relationship in other relational behaviors (e.g., initiation, responsiveness, self-disclosure, emotional support, conflict management; see Samter, 2003), but those associations were beyond the scope of this present project.

A fourth implication of these results is that mediators should be considered when exploring the association between reported play and relationship satisfaction. Both reported play and satisfaction of autonomy, competence, and relatedness needs (i.e., interpersonal need

satisfaction) were predictive of relationship satisfaction of close friendships with interpersonal need satisfaction having greater associations than play on satisfaction. The relationship between play and satisfaction was still significant, as indicated by the results of both Studies 1 and 2; however, this direct effect was mediated by satisfaction of autonomy, competence, and relatedness needs. These results suggest that play serves multiple functions in a relationship, and part of that function is meeting interpersonal needs in the close friend context. The path models explored in the current studies accounted for about half of the variance in relationship satisfaction, so there are other likely unexplored (and mediating) factors present in close friendships.

As a final note, the communicative behavior of play is of unique importance to friendships because it distinguishes friendships from other relationships. Friends engage in a variety of interpersonal behaviors (e.g., self-disclosure, comforting), but the presence of play is a defining characteristic of friendship and marks the transition from acquaintance to friend (see Rawlins, 2008). Certainly, other types of relationships (e.g., family, co-worker, teammate, acquaintance) can have play in them, but those relationships could still be defined as such without play ever being present. As Study 1 and Study 2 revealed, play has a unique effect on relationship satisfaction between close friends, even accounting for the mediation by interpersonal need satisfaction.

Limitations

Although the findings presented in this project provide new insights and contributions, there are several limitations that warrant note—some common to empirical research and some more specific to the study. The primary limitation of this project was perhaps its reliance on self-report measures and potentially inflated correlations due to common method variance (see

Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In addition, self-report measures rely on participants to be honest, understand the instructions and language of the items, and be accurate in their introspection and assessments. At several points while collecting data in the lab for Study 2, a participant would stop to ask me what a particular word meant in an item. For each student that asked for clarification, the possibility exists that other students also did not understand and guessed at a response.

Also, because Studies 1 and 2 asked participants to report on generally positively-held constructs (e.g., how playful you are or how much play you and your friends engage in), the possibility exists for social desirability bias (see Podsakoff et al., 2003). Although friends were not shown each other's answers, some friends may have felt compelled to portray their friendship in a more positive light, either because they want to believe they are the kind of person who has a great relationship or wondering if their friend will ask later about "what they said" on the survey about them.

Another limitation of this project was the relatively small correlation between partners on reported play in the APIM analysis, $r = .20$. Although the association between partner play scores was significant, the correlation was small considering the content of the adult communicative play measure. As previously noted, the adult communicative play measure was modified from Proyer's (2017) list of everyday play behaviors; whereas Proyer's list assessed the kinds of play typical to an individual, the measure for this project assessed the kinds of play typical between friends. The measure for this project had items like "we goofed around," "we playfully teased each other," and "we acted carefree." These items are engaged in "together" by friends.

Some variation between answers by friends is expected; however, one would expect friends' assessments of play in the relationship to at least be similar overall. Upon reviewing the data, 17 of the 159 friend pairs had scores that differed by 8 or more on the 18-item play scale. Some differences between friends' scores might happen because of varying interpretations of the items, some differences may happen because participants did not take the time to answer accurately, and some may have occurred because pairs were not truly friends, but had come just to receive extra credit for participating in a survey. This may have been the cause for the outliers mentioned in Chapter 3 that affected model fit.

Another limitation of this project is its inability to make causal and directional claims because of its reliance on survey design. One of the goals of this project was to explore how play functions in close friendships; however, data collected from surveys can show correlations and, at best, only suggest causality. Although this project used path and mediation analysis to explore possible directionality, indicating causality would require a different study with an experimental or quasi-experimental design. Take one claim for example: Friends who report more play are more satisfied. The results from the path analysis suggested that play might foster relationship satisfaction; however, an alternative explanation is that satisfying friendships fosters more play because friends that really like each other play more. The same applies for all associations represented in the path model. In the end, the dynamics of play in close friendships is most likely not as tidy as the path model suggests.

A final limitation of this project was the reliability of the interpersonal needs satisfaction measure: Study 1 (autonomy, $\alpha = .73$; competence, $\alpha = .73$; relatedness, $\alpha = .72$), Study 2 for Partner 1 (autonomy, $\alpha = .75$; competence, $\alpha = .70$; relatedness, $\alpha = .59$) and Partner 2 (autonomy, $\alpha = .63$; competence, $\alpha = .76$; relatedness, $\alpha = .69$). Although most of these levels are

marginally acceptable according to standard “rules of thumb” for Cronbach’s alpha, they are still, yet, just marginally acceptable. A measure can only be as valid as it is reliable, and, thus, the lowered levels of reliability for this measure pose a challenge to the validity of its findings. Several of the associations with SDT needs that were significant in Study 1 were not found in Study 2; this may have been a result of the reliability of the interpersonal needs satisfaction measure.

Future Directions

Given the findings and limitations of this dissertation, I propose several suggestions for future directions of research on adult communicative play. First, future research should develop new, theoretically-based measures for adult communicative play. As noted, the instrument used to assess adult communicative play for this dissertation was adapted from Proyer’s (2017) list of everyday play behaviors. Although care was taken to limit this instrument to communicative play items, the instrument was not designed specifically to assess adult communicative play. Similarly, communication researchers Baxter (1992) and Aune and Wong (2002; 2012) used lists of playful behaviors, classified by type; although many of the items reflect communicative play, the instruments are ad hoc and empirically derived rather than based upon some theoretical formulation.

Chapter 1 of this dissertation forwarded Greene and Pruim’s (2018) definition of quintessential adult communicative play as intrinsically rewarding, message-based interactions. Future research should explore crafting theoretically-based instruments that can not only measure presence or absence of adult communicative play in relationships, but also that can suss out features of adult communicative play (e.g., how engaged a person feels during an instance of play or how much enjoyment was experienced during play).

One approach could be to differentiate play by dimensions like social control, interaction involvement, and interpersonal intimacy. For example, play could theoretically differ regarding control in mutuality; some play interactions are initiated and sustained more by one individual, and other play interactions are shared creations. Regarding involvement, play could theoretically differ in its intensity, length, and duration; for example, some play is contained in short, effervescent interchanges, and other play is conducted over multiple turns. Long-running jokes can last years, and some play might happen in a single “look.” Regarding intimacy, play can differ on levels of personalness; for example, some play relies on layers of interpersonal meaning and closeness, whereas other play is purely surface level with regard to personal information and connection.

Second, as described in Chapter 1, adults view playfulness as serving several functions in their relationships (i.e., being happy, having fun, motivating themselves or others, being creative, cultivating relationships, relaxing, and dealing with stress; Proyer, 2014). Play is a manifestation of playfulness, and the results of this project revealed that the effects of playfulness on relationship satisfaction are fully mediated by play. Future research should explore whether play is positively associated with these functions of playfulness.

Third, future research should extend the proposed path model. Adult communicative play and interpersonal need satisfaction are certainly important elements in relationship satisfaction between close friends; however, as noted in Chapter 1, adult friendships can be marked by different expectations, skills, rules, and rituals. Furthermore, the elements of friendship (e.g., companionship, mutual support, reciprocity, and affection; see Bleiszner, 1998) manifest in a variety of both relational behaviors (e.g., listening, showing affection) and instrumental behaviors (e.g., giving advice). Future research should explore how adult communicative play

functions in relation to these expectations, skills, rules, and rituals, as well as how it is associated with other behaviors in the relationship.

Fourth, future research should explore adult communicative play in contexts other than close friendships. One area of particular interest for play research is in business, management, and organizational contexts. As noted in Chapter 1, play is associated with creativity (Peterson & Seligman, 2004), reduced stress (Winnicott, 1971), enhanced workplace relationships (Abramis, 1990), general well-being (Van Leeuwen & Westwood, 2008). In fact, Van Leeuwen and Westwood argue that a better understanding of play environments could lead to enhanced user experiences. Future research should explore how adult communicative play is related to outcomes desirable to and profitable for business communities, which could, in turn, lead to new approaches to incorporating play into the workplace.

Fifth, future research should explore whether and how adults play differently at the various stages of a relationship: initial orientation, experimentation, growth in affection, and stabilization (see chapter 1; Altman and Taylor [1973]; Knapp and Vangelisti [2008]). One way to approach this would be to conduct the path analyses in this project with friends at different stages in their relationship. Another approach would be a longitudinal design, following friends as they grew in their relationship (e.g., Ledbetter, Griffin, & Sparks, 2007). This would help reveal whether play functions differently as relationships develop, particularly with regard to its associations to interpersonal need satisfaction and relationship satisfaction.

Sixth, future research should utilize experimental or quasi-experimental designs to explore beyond the correlations to ascertain causality. For example, future research could explore the mediation of the direct effect of play on relationship satisfaction by the satisfaction of the SDT need of competence. In Study 1, the satisfaction of competence needs mediated the effect of

play on relationship satisfaction; however, in Study 2, this relationship was no longer significant. Study 1 utilized an internet sample and was more demographically diverse (e.g., age, race, religion, marital status); Study 2 utilized data primarily from undergraduate students. Not only was this second sample younger, but their friendships were typically shorter in years, as well. It is possible that friendships “while still in college” are different from friendships outside of college, that play functions differently in these different types of friendships, and that these friendships meet different needs. One way to explore this would be through quasi-experimental design. For example, college students could be asked to assess their relationship with two different friends: one close friend in college and one close friend they have known for much longer. The differences between these two types of friendships could then be explored.

Conclusion

Although the research presented in this dissertation has limitations, it does contribute to the literature of dispositional playfulness, interpersonal need satisfaction, and relationship satisfaction, it offers conceptual and empirical bases for exploring adult communicative play in close friendships, and it expands findings related to the context of adult close friendships. Additionally, this dissertation contributes to the literature by providing a framework for studying adult communicative play in context with the proposed and tested path model. Finally, it provides new avenues for exploration of actor-partner interdependence related to adult communicative play in close friendships.

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APPENDIX A. DEMOGRAPHIC MEASURES

The following items were used as demographic measures:

What is your age?

What is your level of education?

- Some high school, no diploma
- High school graduate, GED
- Some college
- Technical/vocational training
- Associate's degree
- Bachelor's degree
- Master's degree
- Professional/Doctoral degree

What is your sex?

- Male
- Female
- Other/Prefer not to answer

What is your household annual income?

- Under \$25,000
- \$25,000-\$34,999
- \$35,000-\$49,999
- \$50,000-\$74,999
- \$75,000-\$99,999
- \$100,000-\$149,000
- \$150,000-\$199,999
- \$200,000 or above

What is your race/ethnicity?

- White
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian or Pacific Islander
- Other

What is your marital status?

- Single (never married)
- Married
- Separated
- Widowed
- Divorced

What is your present religion, if any?

Protestant (e.g., Baptist, Methodist, Non-denominational, Lutheran, Presbyterian, Pentecostal, Episcopalian, Church of Christ, etc.)

Roman Catholic

Mormon (Church of Jesus Christ of Latter-day Saints)

Orthodox (such as Greek, Russian, or some other Orthodox church)

Jewish

Muslim

Hindu

Atheist

Agnostic

Nothing in particular

Something else. Please specify

Regarding the close friend you will discuss in the survey today, how long have you known each other?

APPENDIX B. PLAY

Everyday Play Behaviors: The following statements refer to everyday play behavior (Proyer, 2017), and there are no right or wrong answers. Please use the following statements to describe your behavior as best as possible by agreeing or rejecting the statements. Place your marking in the appropriate field ("yes / no"). Please answer each statement and be as honest as possible.

We typically engage in the following behaviors:

1. We did something playful.
2. We goofed around.
3. We did something surprising together.
4. We broke up the routine by doing something unconventional.
5. We made up a saying / engaged in word play.
6. We moved from being serious to being playful.
7. We had a quirky observation.
8. We thought/said/did something sassy or “cheeky.”
9. We playfully teased each other.
10. We did something childish.
11. Our actions were characterized more by improvisation than planning.
12. We broke up a boring situation by doing something unexpected.
13. We acted carefree.
14. We were game for anything.
15. We were slap-happy and/or made mischief.
16. We worked together in an unconventional or creative way.
17. We did an activity just for the fun of it.
18. We had fun not acting our age.

Descriptives for Play

	Study 1	Study 2: Partner 1	Study 2: Partner 2
<i>M</i>	13.73	14.16	13.75
<i>SD</i>	3.95	3.47	4.05

APPENDIX C. INTERPERSONAL NEED SATISFACTION

Basic Psychological Need Satisfaction in Relationships (La Guardia, Ryan, Couchman, & Deci, 2000). Note: this appendix information is verbatim from the authors.

Scale Description

Central to self-determination theory is the concept of basic psychological needs that are assumed to be innate and universal. According to the theory, these needs--the needs for competence, autonomy, and relatedness--must be ongoingly satisfied for people to develop and function in healthy or optimal ways (Deci & Ryan, 2000). Many of the propositions of SDT derive from the postulate of fundamental psychological needs, and the concept has proven essential for making meaningful interpretations of a wide range of empirically isolated phenomena.

This 9-item scale addresses need satisfaction in interpersonal relationships. This scale (on the next page) was used in La Guardia, Ryan, Couchman, and Deci (2000).

Basic Need Satisfaction in Relationships

Note: This questionnaire was designed for use with respect to need satisfaction in particular relationships. For example, it is to assess the degree to which a person experiences basic need satisfaction while relating to his or her spouse, or best friend, or mother, or children, or whomever. So, to use the questionnaire to assess need satisfaction in a relationship, replace the XXXXXXXX with the relationship you are studying. Although we have never done so, you could try using it for relationships in general if that is the question that interests you.

See next page for measure.

In My Relationships

Please respond to each statement by indicating how true it is for you. Use the following scale.

1	2	3	4	5	6	7
not at all			somewhat			very
true			true			true

1. When I am with XXXXXXXX, I feel free to be who I am.
2. When I am with XXXXXXXX, I feel like a competent person.
3. When I am with XXXXXXXX, I feel loved and cared about.
4. When I am with XXXXXXXX, I often feel inadequate or incompetent.
5. When I am with XXXXXXXX, I have a say in what happens, and I can voice my opinion.
6. When I am with XXXXXXXX, I often feel a lot of distance in our relationship.
7. When I am with XXXXXXXX, I feel very capable and effective.
8. When I am with XXXXXXXX, I feel a lot of closeness and intimacy.
9. When I am with XXXXXXXX, I feel controlled and pressured to be certain ways.

Scoring Information. Form three subscale scores by averaging item responses for each subscale after reverse scoring the items that were worded in the negative direction. Specifically, any item that has (R) after it in the code below should be reverse scored by subtracting the person's response from 8. The subscales are:

Autonomy: 1 & 5; 9(R) dropped

Competence: 2 & 7; 4(R) dropped

Relatedness: 3 & 8; 6(R) dropped

Descriptives for Interpersonal Need Satisfaction

Study 1

	Autonomy	Competence	Relatedness
<i>M</i>	6.10	5.92	5.51
<i>SD</i>	.95	.99	1.21

Study 2: Partner 1

	Autonomy	Competence	Relatedness
<i>M</i>	6.31	5.87	5.62
<i>SD</i>	.75	.96	1.08

Study 2: Partner 2

	Autonomy	Competence	Relatedness
<i>M</i>	6.20	5.77	5.46
<i>SD</i>	.86	1.07	1.23

APPENDIX D. FRIENDSHIP SATISFACTION

McGill Friendship Questionnaire (Mendelson & Aboud, 2012) ($\alpha = .96$)

The items on this part of the form concern YOUR FEELINGS for your best/casual same-sex friend. On the scale directly to the right of each item circle the number that indicates how much you agree that the statement describes your feelings.

There are no right or wrong answers, because adults' feelings for friends differ from person to person. Just honestly describe your feelings for your friend.

Scale

	Very Much		Somewhat		Somewhat		Very Much	
	Disagree		Disagree		Agree		Agree	
-4	-3	-2	-1	0	1	2	3	4

Items

1	I am happy with my friendship with XXXXXXXX.
2	I care about XXXXXXXX.
3	I like XXXXXXXX a lot.
4	I feel my friendship with XXXXXXXX is a great one.
5	I am satisfied with my friendship with XXXXXXXX.
6	I feel my friendship with XXXXXXXX is good.
7	I want to stay friends with XXXXXXXX for a long time.
8	I prefer XXXXXXXX over most people I know.
9	I think my friendship with XXXXXXXX is strong.
10	I am pleased with my friendship with XXXXXXXX.

11	I am glad that XXXXXXXX is my friend.
12	I hope XXXXXXXX and I will stay friends.
13	I would miss XXXXXXXX if he/she left.
14	I am contented with my friendship with XXXXXXXX.
15	I enjoy having XXXXXXXX as a friend.
16	I would say that XXXXXXXX and I play a lot together
17	I would describe my relationship with XXXXXXXX as close.
18	Mark this answer as "0".

Subscales: Satisfaction (1, 4, 5, 6, 9, 10, 14); Positive Feelings (2, 3, 7, 8, 11, 12, 13, 15)

Descriptives for Relationship Satisfaction

	Study 1	Study 2: Partner 1	Study 2: Partner 2
<i>M</i>	7.97	8.29	8.27
<i>SD</i>	1.20	.79	.92

APPENDIX E. DISPOSITIONAL PLAYFULNESS

Short Measure for Adult Playfulness (SMAP) (Proyer, 2014)

(Note: This material is verbatim from the author.) The following statements refer to your feelings, actions, and perceptions in general. There are no correct or false answers. Please try as much as possible to describe your habitual behavior patterns and attitudes by marking an X through one of the seven alternatives. Please use the following scale:

- (1) strongly disagree
- (2) disagree
- (3) slightly disagree
- (4) neither agree nor disagree
- (5) slightly agree
- (6) agree
- (7) strongly agree

1. I am a playful person.
2. Good friends would describe me as a playful person.
3. I frequently do playful things in my daily life.
4. It does not take much for me to change from a serious to a playful frame of mind.
5. Sometimes, I completely forget about the time and am absorbed in a playful activity.

Descriptives for Playfulness

	Study 1	Study 2: Partner 1	Study 2: Partner 2
<i>M</i>	5.10	5.45	5.46
<i>SD</i>	1.12	1.02	1.02