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The Relationship Between Family Recreation and Relatedness in Children and Their Families

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The Relationship between Family Recreation and Relatedness in
Children and their Families

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A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

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ABSTRACT

The Relationship between Family Recreation and Relatedness in Children and their Families

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Master of Science

The purpose of this study was to provide insight into the factors contributing to relatedness in children, specifically family recreation, and to look at relatedness between family members (family relatedness), and whether or not family recreation makes a contribution to this construct. Two instruments were used to collect data for this study. The Family Leisure Activity Profile (FLAP) measured family recreation involvement and satisfaction, and the Activity-Feelings States Scales (AFS) measured child and family relatedness. The sample included elementary school children between the ages of 6 years and 12 years ($n_1=405$), and the parents of those children ($n_2=405$). The data showed satisfaction with family recreation activities was a significant predictor of children's relatedness with their peers. The data also showed involvement in balance family recreation activities was a significant predictor of a family's relatedness with one another.

Keywords: [relatedness, family recreation, core and balance

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Introduction

The interaction between children, their siblings, and parents can be a powerful tool in the child's development and well-being. Time spent together as a family can result in vital exchanges during childhood that contribute to the social development of the child. As a professional physical education teacher, I observed differences in the way children were able to interact and relate to one another during free play and physical education activities. Some children find it easy to take turns, play fair, work in a team, and empathize with classmates. Other children in the same classes and age groups are unable to master these skills. This observance, along with anecdotal information children share about their various family activities, led me to wonder about the relationship between the recreation activities a family participates in together and a child's ability to relate to his or her peers. Recreational activities can help children learn appropriate social rules such as taking turns and how to cooperate. They also provide families with opportunities to bond with each other and strengthen relationships.

Some recreational activities in which family members participate together can facilitate quality time for family members where communicating and forming bonds between family members is the focus, rather than the specific activity being done. The time a family spends together in recreational activities can improve valuable social skills such as social competence and communication (Lindsey & Mize, 2000; Mactavish & Schleien, 2004; Smith, Freeman & Zabriskie, 2009). For example, Lindsey and Mize found children's *emotion understanding and knowledge* (how well they understand and relate to the emotions of others), an important component of social competence, is higher when the children participate in mutually compliant play with their parents. Lindsey and Mize define mutually compliant play as play that takes on horizontal and peer-to-peer characteristics. Mactavish and Schleien studied family recreation in

families who had children with a disability. These families reported when the family members participated in recreational activities together, the recreation helped family members develop skills such as learning to get along with others, compromising, and negotiating, which are also components of social competence. In addition, these families found family recreation is an effective way of communicating both verbally and through actions, for both the parents and the children. The parents felt recreational activities are avenues to communicate through actions that their children are loved and important.

Skills such as communication and social competence are important in the development of a child's ability to be accepted by and feel related to peers. Hubbard and Coie (1994) found emotion knowledge in children is predictive of peer acceptance. Stiles and Raney (2004) studied the relationship between communication and peer relations in young adolescents, and found the ability to freely express one's thoughts, feelings, and opinions leads to higher peer acceptance. Because the abilities to develop social competence and communicate well facilitate better peer acceptance, these skills lead to more opportunities for the child to interact with and learn to relate to his or her peers.

This concept of relatedness is one of three basic psychological needs outlined under the umbrella of Self-Determination Theory (SDT) (Ryan & Deci, 2000). These psychological needs -autonomy, competence, and relatedness- are social factors which must be met adequately in order for a person to be motivated and to function at the optimum level (Cox & Williams, 2008; Martin & Dowson, 2009). The SDT states when these three needs are unmet, people experience diminished motivation and well-being (Ryan & Deci). This study focuses specifically on the need for relatedness, a feeling of mutual respect and emotional connectedness to others (Baard,

Deci, & Ryan, 2004), because it is the least-studied construct within SDT, compared with autonomy and competence (Cox & Williams, 2008; Guiffrida, Gouveia, Wall, & Seward, 2008).

Children who exhibit high levels of relatedness with peers experience many positive academic, social, and emotional outcomes, such as better school adjustment (Gest, Welsh & Domitrovich, 2005) and higher classroom engagement (Furrer & Skinner, 2003). Relatedness also contributes to decreased social loneliness and depressed mood (Boivin, Hymel, & Bukowski, 1995). Klima and Repetti (2008) also studied the benefits of relatedness in children and found children who are able to relate well with their peers have higher self-worth. Previous research makes it clear that relatedness is a valuable construct to study because of its positive contributions to individuals' overall well-being.

Review of Literature

An overview of Self-determination Theory, relatedness, and family recreation is provided here in order to establish a theoretical framework for this study. This overview also provides insight into the holes that exist in the current research on the connection between relatedness and family recreation.

Self-Determination Theory

Self-Determination Theory (SDT) is a theory of human motivation and personality that concentrates on the social contexts and environmental factors that assist in or hinder the development of social functioning and personal well-being (Ryan & Deci, 2000). This theory has been used to explain and predict human motivation and personality development in several different contexts, such as education (Lavigne, Vallerand & Miguelon, 2007), sports (Chatzisarantis & Hagger, 2007), parenting (Bouchard & Lee, 2007), organization and management (Baard, et al., 2004; Otis & Pelletier, 2005), and health behaviors (Edmunds &

Duda, 2007; Williams, Cox, Hedberg & Deci, 2000). SDT is a broad theory that has several different branches of interest under the larger umbrellas of motivation and well-being. One specific branch of SDT, Basic Needs Theory, focuses on the link between the satisfaction of basic psychological needs and personal well-being.

Basic needs. Ryan and Deci (2000) define a basic need as “an energizing state that, if satisfied, conduces toward health and well-being but, if not satisfied, contributes to pathology and ill-being” (p. 74). Ryan and Deci have found there are three basic human psychological needs which are essential for overall well-being. These are the need for competence, which is a feeling of “a sense of mastery over one’s capacity to act in the environment” (Veronneau, Koestner, & Abela, 2005, p. 281), the need for autonomy, or having a sense of “choice, initiative, and endorsement of the activities one performs” (Veronneau et al., p. 280-281), and the need for relatedness, or social acceptance (Hurtes, 2002), which is a feeling of mutual respect and emotional connectedness to others (Baard, et al., 2004). There is a large body of literature making the connection between satisfaction of these basic needs and psychological well-being (Greguras & Diefendorff, 2009; Milyavskaya, et al., 2009; Ryan & Deci, 2008) .

Well-being. According to the SDT, well-being can be defined as more than the absence of pain and discomfort, or as the presence of happiness. The Theory takes a more holistic approach to defining this concept, an approach known as the eudaimonic perspective. Eudaimonia is the concept of actualizing your potential and realizing your true nature (Deci & Ryan, 2008). The eudaimonic perspective looks at well-being as a process, rather than an outcome (Deci & Ryan). It stems from a philosophy introduced by Aristotle, who believed eudaimonia is the most important human good, a description of character rather than a feeling (Broadie & Rowe, 2002).

With this perspective of well-being in mind, research shows humans cannot thrive without the satisfaction of all three needs (Ryan & Frederick, 1997; Ryan & Deci, 2008). When all three needs are satisfied sufficiently in an individual, that individual enjoys higher psychological growth and well-being (Ryan & Deci). Several outcomes of need satisfaction contribute to this psychological growth and well-being. One of these is identity development. La Guardia (2009) reports that autonomy, competence, and relatedness lead to identity development through the process of intrinsic motivation in life goals and challenges, and that this identity development leads to a perception of overall well-being. She explains that all three psychological needs work in tandem to intrinsically motivate a child to develop a rooted identity.

Another contributing factor of well-being is valuing intrinsic (as opposed to extrinsic) goals or aspirations (Niemi, Ryan & Deci, 2009). Intrinsically motivated aspirations and motivations are a focus of SDT, and are characterized by a propensity toward growth and internal fulfillment (Niemi, et al.). Intrinsic aspirations contribute in several ways to well-being. For example, Williams, et al. (2000) found youth who value intrinsic aspirations are less likely to engage in risky health behaviors. Intrinsic aspirations also lead to positive affect, vitality, and self-actualization, more indicators of overall well-being (Kasser & Ryan, 1996).

Relatedness

When comparing research on the three basic needs (competence, autonomy, and relatedness) outlined in SDT, competence and autonomy have been well studied in the literature, but relatedness has been relatively overlooked (Cox & Williams, 2008; Guiffreda et al., 2008). Several studies focus solely on competence and autonomy, while leaving out the important third branch, relatedness.

In the studies on relatedness that have been done so far, this construct has been found to positively affect many areas of life for different populations. In a study done with residents of a nursing home, a high-quality relatedness connection with friends and family was significantly related to positive well-being and life satisfaction among the elderly (Kasser & Ryan, 1999). For adults, relatedness in the work environment significantly predicts increases in job performance and adjustment (Baard, et al., 2004), as well as improved work motivation and satisfaction (Richer, Blanchard, & Vallerand, 2002).

Less is known about the effects of relatedness on children. Veronneau et al., (2005) directly addressed this population in a study on well-being in children and adolescents. Results of this study show that when the children's need for relatedness was satisfied, their future levels of positive affect increased. Positive affect is a feeling state of happiness and enjoyment (Veronneau et al.). Synonyms for positive affect used in the research include feeling grateful, upbeat, liking, expressing appreciation, joyful, pleased, and enjoyment/fun (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Examples of relatedness studies where children's well-being is not the main focus, but an indirect tangent, include relatedness within families and relatedness with peers (Hurtes, 2002; Smetana & Gettman, 2006).

Relatedness within the family. The research on relatedness within the family is somewhat limited because most of the studies on the family do not look at relatedness as its own separate construct. Most of the current research on relatedness within the family focuses on the autonomous-relatedness relationship between parents and adolescents (Allen, Hauser, Bell, & O'Connor, 1994; Phinney, Kim-Jo, Osorio, & Vilhjalmisdottir, 2005; Samuolis, Hogue, Dauber, & Liddle, 2005; Smetana & Gettman, 2006). This relationship is defined as one where the adolescent feels both connected with and supported by the parents (Samuolis et al.). Studies

show several positive outcomes for adolescents when they experience this type of relationship with their parents. Smetana and Gettman found adolescents who show early signs of relatedness with their parents have higher quality romantic relationships later on in life. A strong autonomous-relatedness relationship also contributes to positive ego and identity development during adolescence (Samuolis et al.).

Conversely, when parents and adolescents do not enjoy a relationship strong in autonomy and relatedness, negative outcomes often occur. According to Allen et al. (1994), adolescents who are unable to develop autonomy and relatedness with their parents show greater signs of depressed affect, or behavioral exhibitions of negative emotion, and externalizing behaviors. Externalizing behaviors are negative actions which are directed outwardly, such as lying, stealing, destroying property, etc. (Allen et al.).

There are a few studies that specifically look at relatedness between children and their parents. Ryan, Stiller, & Lynch (1994) found children who have a quality relatedness relationship with their parents are more likely to have a quality relatedness relationship with their teachers at school. These children are also able to function better academically and display more engagement and self-esteem in school (Ryan et al.).

Relatedness with peers (social acceptance). The later elementary school years, or middle childhood, are a key point in a child's social development. During these years, children move from a family and parent-centered life to the public life, where they spend more time with peers and teachers than they do with their parents (Cavanagh & Huston, 2008). During middle childhood and adolescence, social acceptance is a primary goal for young people. Hurtes (2002) found relatedness with peers, especially for middle childhood and adolescent girls, is a critical concern. In fact, Hurtes discovered, during this time of life, relatedness is more important to the

adolescents than autonomy or competence. Researchers have found several predictors of social acceptance (Mostow, Izard, Fine & Trentacosta, 2002), such as prosocial behavior, social problem-solving skills, and emotion knowledge (Hubbard & Coie, 1994).

In one study, fourth grade youth who exhibited low levels of peer acceptance displayed more evidence of maladjustment in school two years later (Klima & Repetti, 2008). Low social acceptance during middle childhood also contributes to increased peer victimization (Malcolm, Jensen-Campbell, Rex-Lear & Waldrip, 2006) and low friendship quality (Parker & Asher, 1993). Children who are able to relate well with their peers during middle childhood exhibit less loneliness (Boivin, Hymel, & Bukowski, 1995) as well as increased self worth (Klima & Repetti). Studies such as these indicate that relatedness with peers prevents problems and promotes well-being during this critical time in a child's development.

Family Recreation

Historically, family recreation research has looked at the recreation activities and patterns of couples and then generalized those results to the entire family (Zabriskie, 2001). Some basic findings from these early studies on family recreation show that different types of recreation influence marriages in different ways (Orthner, 1975), and that constraints such as employment, income, and relationship stress can temper the benefits of family recreation (Orthner & Mancini, 1991).

Recently, more studies have been done which look at the recreation behavior of the entire family, from the perspective of both parents and children (Scholl, McAvoy, Rynders, & Smith, 2003; Zabriskie & Heyne, 2003). This broader sample base has provided deeper insight into the effects of family recreation on the whole family. For the purpose of this review, these studies

have been broken into two sections: (a) overall benefits of family recreation and (b) child outcomes of family recreation.

Benefits. One major benefit of family recreation is increased family functioning (Shaw, 2001). Family functioning refers to positive interactions within the family and high cohesion between family members. Shaw's qualitative study looked at interactions between siblings as well as between parents and children. The results of this study offer further explanation to the construct of family functioning by breaking this construct into subthemes such as communication, bonding, and a highly developed sense of family. The findings in the literature on recreation leading to increased family functioning are supported in normative families as well as families that include special populations, such as children with a disability (Mactavish, Schleien & Tabourne, 1997; Scholl et al., 2003) and transracially adopted children (Zabriskie & Freeman, 2004).

Child outcomes. Apart from the general benefits to the family as a whole, there are specific outcomes for children in families who participate in family recreation. Children whose families participate together in recreational activities are more likely to participate in recreation themselves (King et al., 2006), and this participation in turn leads to several positive outcomes. In a study on the outcomes of different types of recreation participation during childhood, Fletcher, Nickerson and Wright (2003) found that recreation participation leads to increased academic performance and competence, as well as a higher level of social competence among elementary school children. Participation in recreation that requires physical activity has a multitude of positive effects on children, such as an established life-time routine of being physically active (Thompson, Rehman, & Humbert, 2005) and decreased obesity (Spinks, Macpherson, Bain, & McClure, 2007).

Core and Balance Model of Family Functioning

The Core and Balance Model of family leisure functioning proposes there are two interrelated categories of family leisure, core and balance. When utilized, these categories lead to family cohesion and adaptability and increased family functioning (Zabriskie & McCormick, 2003). Core leisure activities are categorized as being low-cost, accessible, everyday activities that the family participates in on a regular basis. Balance leisure activities are those which are less common and more novel for the family. These two categories or patterns of family leisure are derived from Kelly's (1996) explanation of two contrasting needs that influence human behavior. Kelly describes these needs as stability and change, and proposes that leisure activities can fulfill both. According to the Model, core activities address a family's need for stability while balance activities address the need for change and novelty. When the need for stability is met, the family is able to increase their cohesion, and when the needs for change and novelty are met, the family's adaptability is increased. A balance between these two aspects of family life, cohesion and adaptability, lead to better family functioning (Olson, 2000)

Zabriskie and McCormick (2003) have developed a means of measuring and understanding family functioning in terms of family leisure. The Family Leisure Activity Profile (FLAP) is based on the Core and Balance Model, and was designed to measure leisure involvement and satisfaction within a family setting. The FLAP measures a family's involvement in the two categories of family leisure outlined in the Core and Balance Model. Half of the questions ask about core activities, and half of the questions ask about balance activities. The involvement variable is measured by questions asking first, how frequently the family participates in the activity (frequency), and second, how long the activity generally lasts each time it is done (duration). The satisfaction variable is measured by asking the respondents

to report on their levels of satisfaction with each activity. This is reported on a Likert scale which ranges from one (“very dissatisfied”) to five (“very satisfied”) (Zabriskie & McCormick).

Conclusion

There is a need for more literature on the relationship between relatedness and family recreation and on the effects of relatedness during middle childhood. This study was designed to contribute to the literature on these topics. The purpose of this study is five-fold: (a) To determine if there is a relationship between overall family recreation involvement and the relatedness to peers that a child from that family displays, (b) to determine if there is a relationship between overall family recreation involvement and the family relatedness that family displays, (c) to determine if there is a relationship between overall family recreation satisfaction and the family relatedness that family displays, (d) to determine if there is a positive relationship between core family recreation involvement and the relatedness to peers that a child from that family displays, and (e) to determine whether core family recreation involvement has a stronger relationship with family relatedness than balance family recreation involvement.

Methods

In order to investigate the possible predictive relationship between the family recreation activities in which a child is involved in and satisfied with and a child’s relatedness with peers during middle childhood. This study utilized a quantitative approach to investigate this possible relationship. Information about the study sample, data collection procedures, instrumentation, and data analysis procedures are provided.

Sample

The population for this study was elementary school children between the ages of six years and 12 years of age and their parents. Cavanagh and Huston (2008) stated this age range,

called middle childhood, is a critical point in a child's social development. The parents were included because they should be able to provide information about the patterns of the children's families that the children themselves would not be able to provide adequately.

The sample of parents ($n_1=405$) was drawn from a national database supplied by an online survey company, Survey Sampling. One child for each parent was also included in the sample ($n_2=405$). Eighty seven male parents and 318 female parents took the survey, and the largest group of parents ($n=152$) fell within the 36-45 years old age bracket. Most parent participants ($n=285$) were married at the time they took the survey.

The mean number of children per family was two. The children's ages were spread out relatively evenly between six years and 12 years old. The largest group of children participants ($n=77$) were 10 years old.

Instrumentation

The Family Leisure Activity Profile (FLAP) (Zabriskie & McCormick, 2001) was used to measure each family's recreation patterns and attitudes. The FLAP is based on the Core and Balance Model of family leisure functioning (Zabriskie & McCormick, 2003).

The FLAP uses 16 items to measure involvement and satisfaction in both core (eight items) and balance (eight items) family recreation activities. The questions specifically ask whether or not the respondent participates in the activity with family members. If the answer is yes, the respondent goes on to report on the frequency of participation and duration of participation. These two scores (frequency and duration) are multiplied together for a complete involvement score. The involvement scores for the core section and the balance section are summed together for a comprehensive family leisure involvement score. In addition to the involvement scores, the instrument also calculates leisure satisfaction scores. The respondents

rate their level of satisfaction on a Likert scale, which gives a satisfaction score between one (“very dissatisfied”) and five (“very satisfied”). Psychometric tests on the FLAP show that the instrument has acceptable reliability ($r = .78$ for total leisure involvement). The FLAP also has content and construct validities which are within acceptable ranges (Zabriskie & Freeman, 2004).

The relatedness variable was measured using the Activity-Feeling States Scales (AFS) (Reeve & Sickenius, 1994). The AFS is a 13-item scale which is broken down into four subscales: (a) self-determination, (b) competence, (c) relatedness, and (d) tension. Each of these subscales has three or four items associated with it: (a) Self-Determination- Offered choices what to do, Free, I want to do this, My participation is voluntary; (b) Competence- Capable, Competent, Achieving; (c) Relatedness- Part of a team, Involved with friends, Brotherly/sisterly; (d) Tension- Stressed, Pressured, Uptight.

The AFS was developed under the umbrella of the Self-determination Theory after researchers noted a lack of instruments that quantified the three psychological needs outlined in the Self-Determination Theory (autonomy, competence, and relatedness). The Scale is designed to measure the three constructs within the context of specific activities; this allows the researcher to understand the extent to which these needs are affected by environmental factors (Reeve & Sickenius, 1994). The authors of the scale designed it in such a way so as to make it possible to apply to any variety of activities. The specified activities for this study will be “Participating in family recreation,” for the parents and “Playing with your friends outside your school classroom” for the children. This activity was chosen in order to highlight the degree of relatedness that occurs when children are interacting with their peers in a relaxed, non-structured environment.

The AFS is scored by calculating the means for each of the items within the four subscales (Self-determination, Competence, Relatedness, and Tension). Each individual item is

scored on a scale of 1-7, 1 representing Strongly Disagree and 7 representing Strongly Agree. The AFS yields four scores, one for the means of each of the four subscales.

Reliability and validity for the AFS were evaluated using five experimental samples of college students who completed the scales. Cronbach's alpha coefficients show the estimated internal consistency of each scale. The coefficient for the Relatedness scale was computed as .75 (with a range of .63 to .83). External validity scores were also computed in order to test the validity of each subscale against other instruments measuring the same construct. The Relatedness scale was measured against Wellborn and Connell's (1987) Peer Relatedness Scale. The correlation between these two scores was $r = .48$.

Procedures

The parent sample for this study was drawn through an online survey company, which had access to a large national database. The survey company selected the sample based on the following requirements: (a) the respondents must be parents of at least one child between the ages of six years and 12 years, and (b) the child within this age range must be available to answer a portion of the questions on the study. The initial contact was an email from the online survey company. The email introduced the parent to the purpose and format of the study, and provided a link to the FLAP and the AFS. The link took the subject to the Qualtrics website, an online survey host site, where the two scales were entered in. A consent form was not necessary for the parent subjects because they have already given their approval to participate in research studies through the online survey company. The child permission form and child assent forms appeared as the first screen on the Qualtrics website. After the permission and assent forms, the parent subjects answered demographic questions concerning the following: (a) Age of Parent, (b)

Gender of Parent, (c) Age of Child, (d) Gender of Child, (e) Ethnicity, (f) Religion, (g) Marital Status of Parent, (h) Number of Children, and (i) Location.

The parent filled out the FLAP as well as the relatedness scale, the Activity-Feelings States Scale (AFS), on the Qualtrics site. The questions on the AFS were added to the end of the FLAP rather than presented as a separate survey. There were clear instructions written at the beginning of the AFS informing the parents that the family recreation portion of the survey is finished, and that the last questions are measuring how they feel during specific activities. After the parents completed the AFS they assisted their children in answering the questions on the AFS as well. There were two sets of identical questions, one for the parents' responses (to be answered in the family context: "When my family members are participating in family recreation we feel...") and one for the children's responses (to be answered in a peer social setting context: "When I am playing with friends outside of my school classroom I feel..."). When both the parents and the children finished filling out the questionnaires, the data was saved on the Qualtrics site, where it was accessed by the researcher.

Data Analysis

The collected data were analyzed using SAS statistical software. The data were first cleaned to check for normality, and unusable data points (outliers and incomplete responses) were deleted.

Pearson correlations between the dependent and independent variables were examined for multicollinearity. Multiple regression analyses were performed on the independent variables in order to determine their relative and collective contributions to the dependent variables. The demographic variables listed in the previous paragraph were included in the regression analysis as independent variables. These analyses measured the amount of influence that each

independent variable has on the dependent variables, based upon the amount of variance identified in the analysis. Eight blocked multiple regression analyses were performed in order to test the variance that several individual independent variables have on the respective dependent variable.

Results

The initial response from survey participants was adequate for the study purposes, with the total number of completes numbering 509. After removing unusable data points, the total number of respondents was 405. The family recreation scores, measured by the FLAP and answered by the parents, were divided into involvement and satisfaction subgroups. The overall involvement scores (core and balance activities combined), which were reported by the parents, ranged from 0 to 329, with a mean score of 99.35 ($SD = 54.74$). The balance involvement scores ranged from 0 to 261, mean score 71.41 ($SD = 47.03$). Core involvement scores had a range of 0 to 146, with a mean score of 27.93 ($SD = 14.96$). In the satisfaction subgroup the balance scores ranged from 8 to 40, with a mean score of 30.53 ($SD = 5.83$), and the core scores ranged from 8 to 40, with a mean score of 31.62 ($SD = 5.75$).

The scores from the AFS are also divided into the four subgroups. Each subgroup had a maximum possible score of 28. The family relatedness scores ranged from 3 to 21, with a mean score of 16.18 ($SD = 3.26$). Family competence scores also ranged from 3 to 21, with a mean score of 16.51 ($SD = 3.23$). Family self-determination scores ranged from 4 to 28, mean score 22.07 ($SD = 4.16$). Family tension scores ranged from 3 to 21, with a mean score of 8.12 ($SD = 4.38$). The child relatedness scores ranged from 3 to 21, with a mean score of 16.01 ($SD = 3.38$). The scores for child competence ranged from 3 to 21, and the mean score was 16.32 ($SD = 3.17$). Child self-determination scores ranged from 4 to 28, with a mean score of

22.94 ($SD = 3.98$). And finally, child tension scores ranged from 3 to 21, with a mean score of 7.46 ($SD = 4.32$).

An examination of the correlation coefficients showed significant correlations among several of the variables (see Tables 1, 2). These results helped guide the selection of variables for further analysis. There was a statistically significant relationship between involvement in both Core and Balance family recreation activities and family self-determination, family competence, and family relatedness. The child scores on the AFS showed statistically significant relationships between Core involvement and relatedness, and between Balance involvement and self-determination, competence, relatedness, and tension.

After the correlation analyses were complete, a blocked multiple regression analysis was conducted to further explore the significant relationships among key variables (Tables 3 & 4). The first block included all demographic variables and the second block included those independent variables which were important to the study's purposes (i.e. Core Involvement, Balance Involvement, Core Satisfaction, and Balance Satisfaction). Results from these procedures show that the significant predictors of the dependent variables are as follows: (a) Family relatedness- balance involvement ($p = .0014$) and core satisfaction ($p < .0001$); (b) Child relatedness- core satisfaction ($p = .0006$); (c) Family self-determination- balance involvement ($p < .0001$) and core satisfaction ($p < .0001$); (d) Child self-determination- core satisfaction ($p < .0001$) and child gender ($p = .0077$); (e) Family competence- balance involvement ($p < .0001$) and core satisfaction ($p < .0001$); (f) Child competence- core satisfaction ($p < .0001$); (g) Family tension- balance involvement ($p = .0009$); (h) Child tension- balance involvement ($p = .0080$). Tables 3 and 4 show expanded information for each of the blocked regression analyses

performed on the two dependent variables most pertinent to this study- family relatedness and child relatedness.

Discussion

The primary purpose of this study was to examine the possible relationship between the family recreation in which a child participates and a child's relatedness to peers during middle childhood. While family recreation involvement did have a significant relationship with child relatedness, the regression analysis showed the strongest contributor to child relatedness was satisfaction with core family recreation activities. This finding highlights the importance of families deliberately choosing and participating in core activities, so that the activities become satisfactory and meaningful to family members. The relationship between core satisfaction and child relatedness with peers may be due in part to the stability that results from these core family recreation activities (Olson, 2000). Children who feel secure and stable as a result of their routines and activities at home are more likely to transfer that stability to outside interactions and relationships. When families achieve satisfaction with core family recreation activities, the children of those families can benefit socially from the resulting familial stability. The results of this study show that one of those social benefits may be relatedness with peers.

A secondary purpose of the study was to examine the possible relationship between family recreation and a family's relatedness with each other. A notable finding that emerged from these research questions is core family recreation involvement was not a stronger contributor than balance family recreation involvement to family relatedness, as was expected. Previous research has found that it is involvement in core activities, not balance, which contributes the most to familial stability and cohesion (Olson, 2000). A possible reason for this discrepancy is the difference in dependent variables across studies.

Many studies on core and balance family recreation have used family functioning as a dependent variable (Shaw & Dawson, 2000; Smith et al., 2009; Zabriskie & Freeman, 2004). As mentioned previously, these studies found that core family recreation activities make a stronger contribution to increased family cohesion (an aspect of family functioning) than do balance family recreation activities. The discrepancy between this study's findings and the findings of previously-done studies may be in part due to the different meanings of the dependent variables. Family functioning refers to the processes and interactions that occur within a family, and is generally measured using three dimensions- cohesion, flexibility, or adaptability, and communication (Olson & DeFrain, 2000). These three dimensions of a family are logically focused on when the majority of the family unit is living together and interacting on a regular basis. This is especially true for the family cohesion dimension, which refers to family closeness (Olson, 1986). The core family recreation activities that contribute strongly to family cohesion are often experienced while the family is young and all family members are still living under the same roof. For example, one of the core family recreation activities used in the FLAP is family dinner. Regular family dinners which include all or most family members generally occur when children are still living at home with parents. Based on this and other examples of core activities, it makes sense that core activities would most strongly contribute to family cohesion.

Family relatedness, on the other hand, refers to the level of emotional connectedness that family members feel with one another (Baard et al., 2004). This construct can be developed and changed over the course of a family's lifetime. Relatedness between family members continues to develop even as children grow into adulthood. The balance activities positively contributing to family relatedness do not necessarily have to be experienced while the family unit is all living together. Activities such as family reunions and vacations are common for families to

experience together after some or all of the children have grown up and moved away. Balance activities become the main source of interaction for a family who is spread apart, and can provide the opportunity for the family to physically and emotionally reconnect with one another. This connectedness in essence is family relatedness (Baard et al.).

In summary, the natures of both core family recreation activities and balance family recreation activities help explain the main findings of this study. Core activities contribute to a child's feelings of stability at home, which in turn gives him or her the confidence and ability to better relate to peers. Balance activities can be experienced across the family lifespan, and therefore can provide continued opportunities for families to stay connected and strengthen their relatedness with one another.

Limitations

This study had a few limitations which need to be acknowledged. The demographics of the study indicate there are some imbalances among participant characteristics. The majority of parents who participated in the study were female. This may have influenced the parent scores, since mothers often have a different perspective on family recreation than fathers. A sizable number of the parent participants (120 out of 409) were divorced, never married, or widowed. There is a chance single-parent households may view or report on family recreation in a different light than households with married parents.

Another limitation of the study involves the use of children participants. The parent participants were carefully instructed on the importance of avoiding influencing their child's responses, but there is no way of controlling for the possibility of this influence. The age range of child participants (six to 12 years old) includes children who are very young and therefore

limited in their vocabulary and comprehension. Some children may not have fully understood the variables on the AFS, which would influence the validity of their responses.

Further research and practical applications

More research is necessary to better understand the contributions of the different types of family recreation activities to relatedness. Expansions on this study could include an in-depth examination of balance family recreation activities, and the reasons behind their significant contributions to relatedness. In addition, it would be helpful to look at ways in which families can use both core and balance family recreation activities to intentionally improve family relations.

Further research would also benefit from an improved instrument to measure relatedness. The AFS is a valid and reliable measure of relatedness, but it is limited in its breadth. Only four of the items on the scale measure relatedness; the other items are designed to measure other constructs. An instrument designed to solely measure relatedness across a variety of contexts would add more insight to the literature on Self-Determination Theory.

The relationship between family relatedness and peer relatedness should also be further examined. Studies which look at whether or not increases in family relatedness are related to increases in peer relatedness would be helpful to both family and youth practitioners. Further research questions to consider might include “what other avenues besides recreation may contribute to family relatedness?”; “does communication during family recreation activities play a role in peer relatedness?”; and “does family relatedness contribute positively to peer relatedness across all age groups?”. Relatedness in children is an understudied topic, and more insights into factors which contribute to this important characteristic are needed.

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Table 1

Correlation Coefficients among Variables- Family Scores

	Self-determination	Competence	Relatedness	Tension
Core Involvement	0.18351 p=0.0002	0.18666 p=0.0001	0.16725 p=0.0007	-0.02159 p=0.6621
Balance Involvement	0.33998 p<.0001	0.36483 p<.0001	0.29706 p<.0001	-0.22200 p<.0001
Core Satisfaction	0.54326 p<.0001	0.49725 p<.0001	0.54110 p<.0001	-0.22525 p<.0001
Balance Satisfaction	0.50611 p<.0001	0.44338 p<.0001	0.47539 p<.0001	-0.20634 p<.0001
FLAP Comprehensive	0.34222 p<.0001	0.36444 p<.0001	0.30091 p<.0001	-0.19663 p<.0001

Table 2

Correlation Coefficients among Variables- Child Scores

	Self-determination	Competence	Relatedness	Tension
Core Involvement	0.18351 p=0.0002	0.18666 p=0.0001	0.16725 p=0.0007	-0.02159 p=0.6621
Balance Involvement	0.33998 p<.0001	0.36483 p<.0001	0.29706 p<.0001	-0.22200 p<.0001
Core Satisfaction	0.54326 p<.0001	0.49725 p<.0001	0.54110 p<.0001	-0.22525 p<.0001
Balance Satisfaction	0.50611 p<.0001	0.44338 p<.0001	0.47539 p<.0001	-0.20634 p<.0001
FLAP Comprehensive	0.34222 p<.0001	0.36444 p<.0001	0.30091 p<.0001	-0.19663 p<.0001

Table 3

Blocked Regression Equations- Family Relatedness

Variable	R ²	Regression Coefficient	p-value
Block 1 (p<.01)	0.343		
Parent age			0.0091
Balance involvement		0.0097	0.0014
Core satisfaction		0.2412	<0.0001
Balance satisfaction		0.0508	0.1602
Block 2 (p<.01)	0.340		
Balance involvement		0.0029	0.0003
Core satisfaction		0.0242	<0.0001

Table 4

Blocked Regression Equations- Child Relatedness

Variable	R ²	Regression Coefficient	p-value
Block 1 (p<.01)	0.183		
Parent age			0.0583
Balance involvement		-0.0005	0.8980
Core involvement		0.0147	0.1909
Core satisfaction		0.1437	0.0006
Balance satisfaction		0.0946	0.0248
Block 2 (p<.01)	0.179		
Core satisfaction		0.1494	0.0003
Balance satisfaction		0.0950	0.0196

Appendix A

The Relationship between Family Recreation and Relatedness in

Children and their Families

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Introduction

The interaction between children, their siblings, and parents can be a powerful tool in the child's development and well-being. Time spent together as a family can result in vital exchanges during childhood that contribute to the social development of the child. One of the ways in which a family can spend valuable time together is recreation. Imagine a mother and father taking their children into the mountains for a day of picnicking and hiking. While there, the parents engage their children in a game of stick-boat racing down a stream. The children and parents work together in teams and share in each other's success, laughing and enjoying one another's company. Recreational activities such as these can help children learn appropriate social rules such as taking turns and how to cooperate. They also provide families with opportunities to bond with each other and strengthen relationships.

Recreational activities in which family members participate together facilitate quality time for family members in which communicating and forming bonds between family members is the focus, rather than the specific activity being done. The time that a family spends together in recreational activities can improve valuable social skills such as social competence and communication (Lindsey & Mize, 2000; Mactavish & Schleien, 2004; Smith, Freeman & Zabriskie, 2009). For example, Lindsey and Mize found that children's *emotion understanding and knowledge*, or how well they understand and relate to the emotions of others, is higher when the children participate in mutually compliant play with their parents. Lindsey and Mize define mutually compliant play as play which takes on horizontal, peer-to-peer characteristics. Mactavish and Schleien studied family recreation in families that had children with a disability. These families reported that when the family members participated in recreational activities together, the recreation helped family members develop social skills such as learning to get along

with others, compromising, and negotiating. In addition, these families found that family recreation is an effective way of communicating both verbally and through actions, for both the parents and the children. The parents felt that recreational activities are avenues in which they can communicate through actions that their children are loved and important.

These skills are important in the development of a child's ability to be accepted by and feel related to peers. Because the abilities to develop social skills and communicate well facilitate better peer acceptance, these skills lead to more opportunities for the child to interact with and learn to relate to his or her peers. For example, Hubbard and Coie (1994) found that emotion knowledge in children, a social norm which indicates the ability to understand the emotions of others, is predictive of peer acceptance. Stiles and Raney (2004) studied the relationship between communication and peer relations in young adolescents, and found that the ability to freely express one's thoughts, feelings, and opinions leads to higher peer acceptance.

The three basic psychological needs outlined under the umbrella of Self-Determination Theory (SDT) (Ryan & Deci, 2000) -autonomy, competence, and relatedness- are social factors which need to be met adequately in order for a person to be motivated and to function at the optimum level (Martin & Dowson, 2009; Cox & Williams, 2008). The Theory proposes that when these needs are unmet, people experience diminished motivation and well-being (Ryan & Deci). The term well-being is defined in SDT as a process of living well, rather than an outcome of happiness or enjoyment. Well-being can be characterized in terms of four basic concepts: (a) pursuing intrinsic goals and values, (b) behaving in autonomous, rather than controlled, ways, (c) being and acting mindful and aware, and (d) behaving in ways that satisfy the three basic psychological needs (Ryan & Deci, 2008).

Children who exhibit high levels of relatedness with peers experience many positive academic, social, and emotional outcomes, such as better school adjustment (Gest, Welsh & Domitrovich, 2005) and higher classroom engagement (Furrer & Skinner, 2003). Relatedness also contributes to decreased social loneliness and depressed mood (Boivin, Hymel, & Bukowski, 1995). Klima and Repetti (2008) also studied the benefits of relatedness in children and found that children who are able to relate well with their peers have higher self-worth. The research makes it clear that relatedness is a valuable construct to study because of its positive contributions to overall well-being. Therefore, the purpose of this study is to provide further insight into the contributing factors of relatedness in children, specifically family recreation.

Problem Statement

The problem of this study is to examine the relationship between the family recreation in which a child participates and a child's relatedness to peers during middle childhood.

Variables

The following variables will be examined in this study:

Independent variables (IVs). The independent variables for this study are (a) Core Family Recreation Involvement, (b) Balance Family Recreation Involvement, (c) Overall Family Recreation Involvement, (d) Core Family Recreation Satisfaction, (e) Balance Family Recreation Satisfaction, (f) Overall Family Recreation Satisfaction, and (g) Family Relatedness.

Dependent variables (DVs). The dependent variables for this study are (a) Peer Relatedness and (b) Family Relatedness.

Hypotheses

This study was designed to test the following hypotheses:

H₁. There is a relationship between overall family recreation involvement and the relatedness to peers that a child from that family displays.

H₀. There is no relationship between overall family recreation involvement and the relatedness to peers that a child from that family displays.

H₂. There is a relationship between overall family recreation involvement and the family relatedness that family displays.

H₀. There is no relationship between overall family recreation involvement and the family relatedness that family displays.

H₃. There is a relationship between overall family recreation satisfaction and the family relatedness that family displays.

H₀. There is no relationship between overall family recreation satisfaction and the family relatedness that family displays.

H₄. There is a positive relationship between core family recreation involvement and the relatedness to peers that a child from that family displays.

H₀. There is not a positive relationship between core family recreation involvement and the relatedness to peers that a child from that family displays.

H₅. Core family recreation involvement has a stronger relationship with family relatedness than balance family recreation involvement.

H₀. Core family recreation involvement does not have a stronger relationship with family relatedness than balance family recreation involvement.

Definitions

The following terms are defined here in order to bring consistency to the study:

Relatedness. A feeling of social connectedness to and acceptance from others (Baard, Deci, & Ryan, 2004).

Family recreation. Recreational activities, patterns, and behavior in which a family participates together.

Family recreation involvement. The product of a family's frequency and duration of participation in specific family recreation activities (Zabriskie & McCormick, 2003).

Family recreation satisfaction. The reported level of satisfaction that an individual has with his or her family recreation activities (Zabriskie & McCormick, 2003).

Middle childhood. The age range of children approximately 6-12 years old (Cavanagh & Huston, 2008).

Core family recreation activities. Low-cost, accessible, everyday family recreation activities that the family participates in on a regular basis (Zabriskie & McCormick, 2003).

Balance family recreation activities. Family recreation activities which are less common and more novel for the family, and which generally occur less often than core activities (Zabriskie & McCormick, 2003).

Delimitations

This study has the following delimitations:

1. The subjects for this study are parents with at least one child between the ages of 6 years and 12 years, and the children within this age range of those parents.
2. The parent sample for this study will be obtained from a national database of voluntary participants.

3. The child sample for this study will be obtained through a snowball technique, based off of the parent participants.

Limitations

This study was limited by the following:

1. The parent subjects for this study will not be a random sample; therefore, the results will not be generalized to a larger population.
2. This study will be correlational; therefore, no causation effects can be implied.
3. The environment in which the children in this study interact with their peers will not be controlled; therefore, there may be social factors that influence the results of the children's survey responses.

Assumptions

This study was based upon these assumptions:

1. The parents answered the questions on their respective surveys without bias toward their child. There will be clear instructions given to the parents on how to allow their children to answer the questions to the best of their ability, without parental influence.
2. The children participating in the study have no severe social or physical disabilities which would alter the meanings of the results of the study.

Importance of Study

This study is important for two reasons. First, it holds the potential to better uncover and understand the contributions of family recreation to familial and personal well-being. Family recreation has already been shown to increase family functioning (Shaw, 2001) as well as marital satisfaction (Orthner & Mancini, 1991), but there is little research on how children are directly affected by this recreation, aside from the general family functioning benefits. Research makes it

clear that there are benefits to the family as a whole when they participate in family recreation, but how do the children benefit in contexts other than the family setting? One such possible context is peer relatedness. The question of whether or not relatedness can be identified as an additional benefit of family recreation remains largely unanswered.

Second, relatedness is the least-studied construct within Self-Determination Theory, compared with autonomy and competence (Cox & Williams, 2008; Guiffrida, Gouveia, Wall, & Seward, 2008). The majority of the studies which have been done on relatedness use adult subjects, rather than children or even adolescents. There is a need for the literature on relatedness in children to be expanded and strengthened in order to bring greater understanding about how this human need can best be filled during the childhood years.

Literature Review

The purpose of this chapter is to provide an overview of the research that has already been done on Self-Determination Theory (SDT) and family recreation. This chapter will specifically explore the current literature on the relatedness component of SDT, and its link to well-being, as well as the history and benefits of family recreation. It will also provide an overview of the Core and Balance Model of Family Functioning, which is often used to explain and understand occurrences in the family recreation context.

Self-Determination Theory

Self-determination theory (SDT) is a theory of human motivation and personality that concentrates on the social contexts and environmental factors that assist in or hinder the development of social functioning and personal well-being (Ryan & Deci, 2000). This theory has been used to explain and predict human motivation and personality development in several different contexts, such as education (Lavigne, Vallerand & Miguelon, 2007), sports

(Chatzisarantis & Hagger, 2007), parenting (Bouchard & Lee, 2007), organization and management (Baard, Deci & Ryan, 2004; Otis & Pelletier, 2005), and health behaviors (Edmunds & Duda, 2007; Williams, Cox, Hedberg & Deci, 2004). SDT is a broad theory that has several different branches of interest under the larger umbrellas of motivation and well-being. One specific branch of SDT (Basic Needs Theory) focuses on the link between the satisfaction of basic psychological needs and personal well-being.

Basic needs. Ryan and Deci (2000) define a basic need as “an energizing state that, if satisfied, conduces toward health and well-being but, if not satisfied, contributes to pathology and ill-being” (p. 74). Ryan and Deci have found that there are three basic human psychological needs which are essential for overall well-being. These are the need for competence, which is a feeling of “a sense of mastery over one’s capacity to act in the environment” (Veronneau, Koestner, & Abela, 2005, p. 281), the need for autonomy, or having a sense of “choice, initiative, and endorsement of the activities one performs” (Veronneau et al., p. 280-281), and the need for relatedness, or social acceptance (Hurtes, 2002), which is a feeling of mutual respect and emotional connectedness to others (Baard, Deci, & Ryan, 2004). There is a large body of literature that makes the connection between satisfaction of these basic needs and psychological well-being (Greguras & Diefendorff, 2009; Milyavskaya, et al., 2009; Ryan & Deci, 2008) .

Well-being. According to the SDT, well-being can be defined as more than the absence of pain and discomfort, or as the presence of happiness; the theory takes a more holistic approach to defining this concept, an approach known as the eudaimonic perspective. Eudaimonia is the concept of actualizing your potential and realizing your true nature (Deci & Ryan, 2008). The eudaimonic perspective looks at well-being as a process, rather than an outcome (Deci & Ryan).

It stems from a philosophy introduced by Aristotle, who believed that eudaimonia is the most important human good, a description of character rather than a feeling (Broadie & Rowe, 2002).

With this perspective of well-being in mind, research shows that humans cannot thrive without the satisfaction of all three needs (Ryan & Frederick, 1997; Ryan & Deci, 2008). When all three needs are satisfied sufficiently in an individual, that individual enjoys higher psychological growth and well-being (Ryan & Deci). Several outcomes of need satisfaction contribute to this psychological growth and well-being. One of these is identity development. La Guardia (2009) reports that autonomy, competence, and relatedness lead to identity development through the process of intrinsic motivation in life goals and challenges, and that this identity development leads to a perception of overall well-being. She explains that all three psychological needs work in tandem to intrinsically motivate a child to develop a rooted identity.

Another contributing factor of well-being is valuing intrinsic (as opposed to extrinsic) goals or aspirations (Niemi, Ryan & Deci, 2009). Intrinsically motivated aspirations and motivations are a focus of SDT, and are characterized by a propensity toward growth and internal fulfillment (Niemi, et al.). Intrinsic aspirations contribute in several ways to well-being. For example, Williams, Cox, Hedberg, and Deci (2000) found that youth who value intrinsic aspirations are less likely to engage in risky health behaviors. Intrinsic aspirations also lead to positive affect, vitality, and self-actualization, more indicators of overall well-being (Kasser & Ryan, 1996).

Relatedness

When comparing research on the three basic needs (competence, autonomy, and relatedness) outlined in SDT, competence and autonomy have been well studied in the literature, but relatedness has been relatively overlooked (Cox & Williams, 2008; Guiffreda, Gouveia, Wall,

& Seward, 2008). Several studies focus solely on competence and autonomy, while leaving out the important third branch, relatedness.

In the studies on relatedness that have been done so far, this construct has been found to positively affect many areas of life for different populations. In a study done with residents of a nursing home, a high-quality relatedness connection with friends and family was significantly related to positive well-being and life satisfaction among the elderly (Kasser & Ryan, 1999). For adults, relatedness in the work environment significantly predicts increases in job performance and adjustment (Baard, Deci & Ryan, 2004), as well as improved work motivation and satisfaction (Richer, Blanchard, & Vallerand, 2002).

Less is known about the effects of relatedness on children. Veronneau et al., (2005) directly addressed this population in a study on well-being in children and adolescents. Results of this study show that when the children's need for relatedness was satisfied, their future levels of positive affect increased. Positive affect is a feeling state of happiness and enjoyment. Synonyms for positive affect used in the research include feeling grateful, upbeat, liking, expressing appreciation, joyful, pleased, and enjoyment/fun (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Examples of relatedness studies where children's well-being is not the main focus, but an indirect tangent, include relatedness within families and relatedness with peers.

Relatedness within the family. The research on relatedness within the family is somewhat limited in that most of the studies on the family do not look at relatedness as its own separate construct. Much of the current research on relatedness within the family focuses on the autonomous-relatedness relationship between parents and adolescents (Allen, Hauser, Bell, & O'Connor, 1994; Phinney, Kim-Jo, Osorio, & Vilhjaldsdottir, 2005; Samuolis, Hogue, Dauber, & Liddle, 2005; Smetana & Gettman, 2006). This relationship is defined as one where the

adolescent feels both connected with and supported by the parents (Samuolis et al.). Studies show several positive outcomes for adolescents when they experience this type of relationship with their parents. Smetana and Gettman found that adolescents who show early signs of relatedness with their parents have higher quality romantic relationships later on in life. A strong autonomous-relatedness relationship also contributes to positive ego and identity development during adolescence (Samuolis et al.).

Conversely, when parents and adolescents do not enjoy a relationship strong in autonomy and relatedness, negative outcomes often occur. Adolescents who are unable to develop autonomy and relatedness with their parents show greater signs of depressed affect, or behavioral exhibitions of negative emotion, and externalizing behaviors. Externalizing behaviors are negative actions which are directed outwardly, such as lying, stealing, destroying property, etc. (Allen et al., 1994).

There are a few studies that specifically study relatedness between children and their parents. Ryan, Stiller, & Lynch (1994) found that children who have a quality relatedness relationship with their parents are more likely to have a quality relatedness relationship with their teachers at school. These children are also able to function better academically and display more engagement and self-esteem in school.

Relatedness with peers (social acceptance). The later elementary school years, or middle childhood, are a key point in a child's social development. During these years children move from a family and parent-centered life to the public life, where they spend more time with peers and teachers than they do with their parents (Cavanagh & Huston, 2008). During middle childhood and adolescence, social acceptance is a primary goal for young people. Hurtes (2002) found that, especially for middle childhood and adolescent girls, relatedness with peers is a

critical concern. In fact, Hurtes discovered, during this time of life, relatedness is more important to the adolescents than autonomy or competence. Researchers have found several predictors of social acceptance (Mostow, Izard, Fine & Trentacosta, 2002), such as prosocial behavior, social problem-solving skills, and emotion knowledge (Hubbard & Coie, 1994).

In one study, fourth grade youth who exhibited low levels of peer acceptance displayed more evidence of maladjustment in school two years later (Klima & Repetti, 2008). Low social acceptance during middle childhood also contributes to increased peer victimization (Malcolm, Jensen-Campbell, Rex-Lear & Waldrip, 2006) and low friendship quality (Parker & Asher, 1993). Children who are able to relate well with their peers during middle childhood exhibit less loneliness (Boivin, Hymel, & Bukowski, 1995) as well as increased self worth (Klima & Repetti). Studies such as these indicate that relatedness with peers prevents problems and promotes well-being during this critical time in a child's development

Family Recreation

Historically, family recreation research has looked at the recreation activities and patterns of couples and then generalized those results to the entire family (Zabriskie, 2001). Some basic findings from these early studies on family recreation show that different types of recreation influence marriages in different ways (Orthner, 1975), and that constraints such as employment, income, and relationship stress can temper the benefits of family recreation (Orthner & Mancini, 1991).

Recently, more studies have been done which look at the recreation behavior of the entire family, from the perspective of both parents and children (Scholl, McAvoy, Rynders, & Smith, 2003; Zabriskie & Heyne, 2003). This broader sample base has provided deeper insight into the effects of family recreation on the whole family. For the purpose of this review, these studies

have been broken into two sections: overall benefits of family recreation and child outcomes of family recreation.

Benefits. One major benefit of family recreation is increased family functioning (Shaw, 2001). Family functioning refers to positive interactions within the family and high cohesion between family members. Shaw's qualitative study looked at interactions between siblings as well as between parents and children. The results of this study offer further explanation to the construct of family functioning by breaking this construct into subthemes such as communication, bonding, and a highly developed sense of family. The findings in the literature on recreation leading to increased family functioning are supported in normative families as well as families which include special populations, such as children with a disability (Mactavish, Schleien & Tabourne, 1997; Scholl et al., 2003) and transracially adopted children (Zabriskie & Freeman, 2004).

Another benefit of family recreation is increased marital satisfaction. Couples who use recreation activities in their marriages to unify them as a couple experience greater marital satisfaction as a result of the recreation (Berg, Trost, Schneider, & Allison, 2001). Many researchers agree that the key to using recreation and leisure to strengthen a marriage is joint recreation activities, as opposed to parallel recreation participation. According to Orthner (1975), parallel activities are simply individual activities done in group settings with minimum interaction among the participants. On the other hand, joint activities are ones which "require a high degree of interaction for successful completion of the activity" (Orthner, p. 93). Orthner and Mancini (1991) and Baldwin, Ellis, and Baldwin (1999) clarified this differentiation between the effects of joint and parallel activities when they found that joint recreation activities result in deeper, more effective communication between couples, which in turn strengthens the marriage.

Child outcomes. Apart from the general benefits to the family as a whole, there are specific outcomes for children in families which participate in family recreation. Children whose families participate together in recreational activities are more likely to participate in recreation themselves (King, et al., 2006), and this participation in turn leads to several positive outcomes. In a study on the outcomes of different types of recreation participation during childhood Fletcher, Nickerson and Wright (2003) found that recreation participation leads to increased academic performance and competence, as well as a higher level of social competence among elementary school children. Participation in recreation that requires physical activity has a multitude of positive effects on children, such as an established life-time routine of being physically active (Thompson, Rehman, & Humbert, 2005) and decreased obesity (Spinks, Macpherson, Bain, & McClure, 2007).

Core and Balance Model of Family Functioning

The Core and Balance Model of family leisure functioning proposes that there are two interrelated categories of family leisure, core and balance, which, when utilized, lead to family cohesion and adaptability and increased family functioning (Zabriskie & McCormick, 2003). Core leisure activities are categorized as being low-cost, accessible, everyday activities that the family participates in on a regular basis. Balance leisure activities are those which are less common and more novel for the family. These two categories or patterns of family leisure are derived from Kelly's (1996) explanation of two contrasting needs that influence human behavior. Kelly describes these needs as stability and change, and proposes that leisure activities can fulfill both. According to the Model, core activities address a family's need for stability while balance activities address the need for change and novelty. When the need for stability is met, the family is able to increase their cohesion, and when the needs for change and novelty are met, the

family's adaptability is increased. A balance between these two aspects of family life, cohesion and adaptability, lead to better family functioning (Olson, 2000)

Researchers have developed a means of measuring and understanding family functioning in terms of family leisure. The Family Leisure Activity Profile (FLAP) is based on the Core and Balance Model, and was designed to measure leisure involvement and satisfaction within a family setting. The FLAP measures a family's involvement in the two categories of family leisure outlined in the Core and Balance Model. Half of the questions ask about core activities, and half of the questions ask about balance activities. The involvement variable is measured by questions asking first, how frequently the family participates in the activity (frequency), and second, how long the activity generally lasts each time it is done (duration). The satisfaction variable is measured by asking the respondents to report on their levels of satisfaction with each activity. This is reported on a Likert scale which ranges from one ("very dissatisfied") to five ("very satisfied") (Zabriskie & McCormick, 2003).

Conclusion

This literature review provides background information on the Self-Determination Theory, the relationship between relatedness and well-being, the benefits of family recreation, and the Core and Balance Model of Family Functioning. There is a need for more literature on the relationship between relatedness and family recreation and on the effects of relatedness during middle childhood.

Methods

The problem of this study is to examine the relationship between the family recreation in which a child participates and a child's relatedness with peers during middle childhood. This

chapter will provide information about the study sample, data collection procedures, instrumentation, and data analysis procedures.

Sample

The population for this study is elementary school children between the ages of 6 years and 12 years of age. Cavanagh and Huston (2008) stated that this age range, called middle childhood, is a critical point in a child's social development. The sample will include both the parents of children in this age group and the children themselves. The parents are included because they should be able to provide information about the patterns of the children's families that the children themselves would not be able to provide adequately.

The sample of parents will be drawn from a national database from an online survey company, Survey Sampling. In order to achieve the desired confidence interval of +/- 5, and using a confidence level of 95%, the researcher has a minimum requirement of 380 parent responses. This sample size was calculated using the following formula: $\text{Sample size} = Z^2 * (p) * (p-1) / c^2$, where the Z value is 1.96, p is the percentage of expected response (50%, or 0.5 in this case), and c is the confidence interval expressed as a decimal (.05) (Creative Research Systems: <http://www.surveysystem.com/sample-size-formula>). The sample of children will be the children of the participating parents, therefore, it is expected that there will be 380 parent responses and 380 children responses available for analysis.

Instrumentation

The Family Leisure Activity Profile (FLAP) will be used to measure each family's recreation patterns and attitudes (see Appendix A). The FLAP is based on the Core and Balance Model of family leisure functioning (Zabriskie & McCormick, 2003).

The FLAP uses 16 items to measure involvement and satisfaction in both core (eight items) and balance (eight items) family recreation activities. The questions specifically ask whether or not the respondent participates in the activity with family members. If the answer is yes, the respondent goes on to report on the frequency of participation and duration of participation. These two scores (frequency and duration) are multiplied together for a complete involvement score. The involvement scores for the core section and the balance section are summed together for a comprehensive family leisure involvement score. In addition to the involvement scores, the instrument also calculates leisure satisfaction scores. The respondents rate their level of satisfaction on a Likert scale, which gives a satisfaction score between one (“very dissatisfied”) and five (“very satisfied”). Psychometric tests on the FLAP show that the instrument has acceptable reliability ($r = .78$ for total leisure involvement). The FLAP also has content and construct validities which are within acceptable ranges (Zabriskie & Freeman, 2004).

The relatedness variable will be measured using the Activity-Feeling States Scales (AFS) (see Appendix B). The AFS is a 13-item scale which is broken down into four subscales: self-determination, competence, relatedness, and tension (Reeve & Sickenius, 1994). Each of these subscales has three or four items associated with it: Self-Determination- *Offered choices what to do, Free, I want to do this, My participation is voluntary*; Competence- *Capable, Competent, Achieving*; Relatedness- *Part of a team, Involved with friends, Brotherly/sisterly*; Tension- *Stressed, Pressured, Uptight*.

The AFS was developed under the umbrella of the Self-Determination Theory after researchers noted a lack of instruments that quantified the three psychological needs outlined in the Self-Determination Theory (autonomy, competence, and relatedness). The scale is designed to measure the three constructs within the context of specific activities; this allows the researcher

to understand the extent to which these needs are affected by environmental factors (Reeve & Sickenius, 1994). The authors of the scale designed it in such a way so as to make it possible to apply to any variety of activities. The specified activities for this study will be “Participating in family recreation,” for the parents and “Playing with your friends outside your school classroom” for the children. This activity was chosen in order to highlight the degree of relatedness that occurs when children are interacting with their peers in a relaxed, non-structured environment.

The AFS is scored by calculating the means for each of the items within the four subscales (Self-determination, Competence, Relatedness, and Tension). The items which fall under the Self-determination subscale are: Offered Choices What to Do, Free, I want to Do This, and My Participation is Voluntary. The Competence subscale includes the items Capable, Competent, and Achieving. The Relatedness subscale includes the items Part of a Team, Involved with Friends, and Brotherly/Sisterly. The Tension subscale is comprised of the items Stressed, Pressured, and Uptight. Each individual item is scored on a scale of 1-7, 1 representing Strongly Disagree and 7 representing Strongly Agree. The AFS yields four scores, one for the means of each of the four subscales.

Reliability and validity for the AFS were evaluated using five experimental samples of college students who completed the scales. Cronbach’s alpha coefficients show the estimated internal consistency of each scale. The coefficient for the Relatedness scale was computed as .75 (with a range of .63 to .83). External validity scores were also computed in order to test the validity of each subscale against other instruments measuring the same construct. The Relatedness scale was measured against Wellborn and Connell’s Peer Relatedness Scale (1987). The correlation between these two scores was $r=.48$.

Procedures

Data for this study will be collected with the assistance of an online survey company with access to a large national database from which the parent sample for this study will be drawn. The survey company will select the sample based on requirements provided them by the researcher. These requirements are that the respondents must be parents of at least one child between the ages of 6 years and 12 years, and that the child within this age range must be available to answer a portion of the questions on the study. The initial contact will be an email from the online survey company that will introduce the parent to the purpose and format of the study, and provide a link to the family recreation scale, the Family Leisure Activity Profile (FLAP; Zabriskie & Freeman, 2004) and the relatedness scales, the Activity-Feeling States (AFS; Reeve & Sickenius, 1994). The link will take the subject to the Qualtrics website, an online survey host site, where the two scales will be entered in. A consent form is not necessary for the subjects because they have already given their approval to participate in research studies through the online survey company.

The parent will fill out the FLAP as well as the relatedness scale, the Activity-Feelings States Scale (AFS), on the Qualtrics site. The questions on the AFS will be added to the end of the FLAP rather than presented as a separate survey. There will be clear instructions written at the beginning of the AFS informing the parents that the family recreation portion of the survey is finished, and that the last questions are measuring how they feel during specific activities (see Appendix B). When the parents are done with the AFS they will assist their children in answering the questions on the AFS as well. There will be two sets of identical questions, one for the parents' responses (to be answered in the family context: "When my family members are participating in family recreation we feel...") and one for the children's responses (to be

answered in a peer social setting context: “When I am playing with friends outside of my school classroom I feel...”).

When both the parents and the children have finished filling out the questionnaires, the data will be saved on the Qualtrics site, where it will be able to be accessed by the researcher. Should the initial response be too low for the study purposes, the researcher will request the online survey company to send another batch of surveys out to another sample of parents in order to increase the response.

Data Analysis

The collected data will be analyzed using SPSS software in order to determine the sample’s descriptive statistics and to run the hypothesis tests. The data will first be cleaned to check for normality, and unusable data points (outliers or incomplete responses) will be deleted. The descriptive statistics analysis will include an examination of the demographics of the study sample. The demographics examined for this study will be Age of Parent, Gender of Parent, Age of Child, Gender of Child, Ethnicity, Religion, Marital Status of Parent, Number of Children, and Location.

A Pearson Correlation analysis will be performed on the data to assess the relationship of family recreation involvement and satisfaction with family relatedness and of family recreation involvement with peer relatedness. Multiple regression analyses will be performed on the independent variables in order to determine their relative and collective contributions to the dependent variables. The demographic variables listed in the previous paragraph will be included in the regression analysis as independent variables. These analyses will measure the amount of influence that each independent variable has on the dependent variables, based upon the amount of variance identified in the analysis. Five blocked multiple regression analyses will

be performed in order to test each of the five hypotheses of the study. Each analysis will test the variance that several individual independent variables have on the respective dependent variable mentioned in that hypothesis. For example, the first analysis will examine Hypothesis 1 (*There is a relationship between overall family recreation involvement and the relatedness to peers that a child from that family displays*), and will test the variance that demographic variables, core family recreation involvement, balance family recreation involvement, and overall family recreation involvement have on peer relatedness.

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Appendix B

Parental Permission for a Minor to Participate in Research

INTRODUCTION: My name is Kristen Berrett. I am a graduate student at Brigham Young University and I am conducting a research study about how family recreation and children's ability to relate to their peers might be related. The purpose of my study is to determine if there exists a relationship between the family recreation in which a child participates and a child's relatedness to peers during middle childhood. I am inviting you and your child to participate in this study because your child falls within the specified age range that I am studying (6-12 years).

PROCEDURES: If you agree to let your child participate in this research study, the following will occur: 1. Your child will be asked to answer questions about how they feel towards their peers while they are interacting with them. 2. Answering these questions will take place in your home, after you have finished filling out your portion of the survey. 3. Your child's portion of the survey will take approximately 15 minutes.

RISKS: There are minimal risks associated with this study. There may be slight discomfort with some of the questions. Your child may answer only those questions that he or she wants to, and your child may stop the entire process at any time.

CONFIDENTIALITY: The primary investigator and her advisers will be the only ones to have access to the data from this study. Participants' names will not be known to the investigators. The survey company does not reveal this information. Each participant will be given an ID number corresponding with their individual survey responses. All data will be collected online and stored in a saved file on the primary investigator's USB drive. The file will be deleted after the study is complete.

BENEFITS: There are no direct benefits to the study subjects. Society may benefit from this study through an increased knowledge of the effects of family recreation and the benefits of relatedness in children.

COMPENSATION: You will not receive external compensation from the investigators. As part of your membership in the online survey company (Survey Sampling) you will receive an incentive upon your completion of the survey.

QUESTIONS ABOUT THE RESEARCH: If you have any further questions about the study, you may contact the researcher (Kristen Berrett) at 801-310-7903 or kristen.berrett@gmail.com, or you may contact Professor Taniguchi at stacy_taniguchi@byu.edu. Questions about your child's rights as a study participant, or comments or complaints about the study may also be addressed to the IRB Administrator, Brigham Young University, A-285 ASB, Provo, UT 84602; 801-422-1461 or irb@byu.edu

PARTICIPATION: Participation in this research study is voluntary. You are free to decline to have your child participate in this study. You may withdraw your child's participation at any point without penalty. Your decision whether or not to participate in this research study will have no influence on you or your child's present or future status at Brigham Young University. If you give your permission for your child to participate in this study, please type an X below.

Appendix C

Child Assent Form

WHAT IS THIS RESEARCH ALL ABOUT? We want to tell you about a research study we are doing. A research study is a special way to find answers to questions. We are trying to find out more about how playing and having fun with your family might help you get along better with your friends. You are being asked to join the study because you are a kid! If you decide that you want to be in this study, you will answer 16 questions on the computer about how you feel when you are playing with your friends.

CAN ANYTHING BAD HAPPEN TO ME? We want to tell you about some things that might upset you if you are in this study. Some of the questions might make you feel a little sad or lonely. If this happens, and you don't want to keep answering questions, tell your mom or dad, and they will let you stop.

CAN ANYTHING GOOD HAPPEN TO ME? We don't know if being in this study will help you. But we hope to learn something that will help other people some day.

DO I HAVE OTHER CHOICES? You can choose not to be in this study.

WILL ANYONE KNOW I AM IN THE STUDY? We won't tell anyone you took part in this study. When we are done with the study, we will write a report about what we found out. We won't use your name in the report.

WHAT HAPPENS IF I GET HURT? If some of the questions that you are answering make you feel upset inside, you can tell your mom or dad and they will let you stop answering.

WHAT IF I DO NOT WANT TO DO THIS? You don't have to be in this study. It's up to you. If you say yes now, but you change your mind later, that's okay too.

Appendix D

Family Leisure Activity Profile

The following questions ask about the activities you do with family members. Please refer to the last year or so. These questions ask about groups of activities, so try to answer in terms of the group as opposed to any one specific example. This may require you to “average” over a few different activities. Don’t worry about getting it exactly “right.” Just give your best estimate.

Take a moment to look at the example below. This will give you some instruction on how to fill in your answers.

QUESTION: Do you participate in home-based activities (for example watching TV/videos, listening to music, reading books, singing, etc.) with family members?

First do you do these activities? → YES X NO ___

If YES how often?	
At least daily	
At least weekly	x
At least monthly	
At least annually	



For about how long per time? (check only one)					
< 1 hour		1-2 hrs		2-3 hours	x
3-4 hours		4-5 hours		5-6hours	
6-7 hours		7-8 hours		8-9 hours	
9-10 hours		>10 hours		> 1 day	

Next, how often do you usually do these activities?



Then, about how long, on average, do you typically do this type of activity each time you do it?

Last, how satisfied are you with your participation with family members in these activities?
Please answer this question **EVEN IF YOU DO NOT** do these activities with your family.

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied		<input type="radio"/>			Satisfied
1	2	3	4	5	
		↑			

Symbol Key

< = less than (e.g. < 1 hour reads "less than one hour")

> = more than (e.g. > 10 hours reads " more than ten hours")

1. Do you have dinners, at home, with family members?

YES _____ NO ____

If YES how often?	
At least daily	
At least weekly	
At least monthly	
At least annually	



For about how long per time? (check only one)					
< 1 hour		1-2 hrs		2-3 hours	
3-4 hours		4-5 hours		5-6hours	

How satisfied are you with your participation or lack of participation, with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

2. Do you participate in home-based activities (for example watching TV/videos, listening to music, reading books, singing, etc.) with family members?

YES _____ NO ____

If YES how often?	
At least daily	
At least weekly	
At least monthly	
At least annually	

For about how long per time? (check only one)			
< 1 hour		1-2 hrs	
3-4 hours		4-5 hours	
6-7 hours		7-8 hours	
9-10 hours		>10 hours	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

3. Do you participate in games (for example playing cards, board games, video games, darts, billiards, etc.) with family members?

YES _____ NO ____

If YES how often?	
At least daily	
At least weekly	
At least monthly	
At least annually	

For about how long per time? (check only one)			
< 1 hour		1-2 hrs	
3-4 hours		4-5 hours	
6-7 hours		7-8 hours	
9-10 hours		>10 hours	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

4. Do you participate in crafts, cooking, and/or hobbies (for example drawing, scrap books, baking cookies, sewing, painting, ceramics, etc.) with family members?

YES ____ NO __

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours		> 1 day	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

5. Do you participate in home-based outdoor activities (for example star gazing, gardening, yard work, playing with pets, walks, etc.) with family members?

YES _____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours		> 1 day	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

6. Do you participate in home-based sport/games activities (for example playing catch, shooting baskets, frisbee, bike rides, fitness activities, etc.) with family members?

YES _____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours		> 1 day	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very Dissatisfied						Very Satisfied
1	2	3	4		5	

7. Do you attend other family members' activities (for example watching or leading their sporting events, musical performances, scouts, etc.)?

YES _____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours		> 1 day	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very Dissatisfied						Very Satisfied
1	2	3	4		5	

8. Do you participate in religious/spiritual activities (for example going to church activities, worshipping, scripture reading, Sunday school, etc.) with family members?

YES ____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours		> 1 day	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

9. Do you participate in community-based social activities (for example going to restaurants, parties, shopping, visiting friends/ neighbors, picnics, etc.) with family members?

YES ____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours		> 1 day	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

10. Do you participate in spectator activities (for example going to movies, sporting events, concerts, plays or theatrical performances, etc.) with family members?

YES _____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours		> 1 day	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

11. Do you participate in community-based sporting activities (for example bowling, golf, swimming, skating, etc.) with family members?

YES _____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours		> 1 day	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

12. Do you participate in community-based special events (for example visiting museums, zoos, theme parks, fairs, etc.) with family members?

YES _____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours			
		1 day		8 days		15 days	
		2 days		9 days		16 days	

3 days		10 days		17 days	
4 days		11 days		18 days	
5 days		12 days		19 days	
6 days		13 days		20 days	
One week		Two weeks		3 or more weeks	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

14. Do you participate in water-based activities (for example water skiing, jet skiing, boating, sailing, canoeing, etc.) with family members?

YES _____ NO ___

If YES how often?	
At least daily	
At least weekly	
At least monthly (during season)	
At least annually	



For about how long per time? (check only one)			
< 1 hour		1-2 hrs	
3-4 hours		4-5 hours	
6-7 hours		7-8 hours	
9-10 hours		>10 hours	
1 day		8 days	
2 days		9 days	
3 days		10 days	
4 days		11 days	
5 days		12 days	
6 days		13 days	
One week		Two weeks	
			3 or more weeks

How satisfied are you with your participation with family members in these activities? (please circle one)

Very		Very
Dissatisfied		Satisfied
1	2	3
		4
		5

15. Do you participate in outdoor adventure activities (for example rock climbing, river rafting, off-road vehicles, scuba diving, etc.) with family members?

YES _____ NO ___

If YES how often?		For about how long per time? (check only one)					
At least daily		< 1 hour		1-2 hrs		2-3 hours	
At least weekly		3-4 hours		4-5 hours		5-6hours	
At least monthly		6-7 hours		7-8 hours		8-9 hours	
At least annually		9-10 hours		>10 hours			
		1 day		8 days		15 days	
		2 days		9 days		16 days	
		3 days		10 days		17 days	
		4 days		11 days		18 days	
		5 days		12 days		19 days	
		6 days		13 days		20 days	
		One week		Two weeks		3 or more weeks	

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	

16. Do you participate in tourism activities (for example family vacations, traveling, visiting historic sites, visiting state/national parks, etc.) with family members?

YES _____ NO ____

If YES how often?		For about how long per time? (check only one)					
At least daily	<input type="checkbox"/>	< 1 hour	<input type="checkbox"/>	1-2 hrs	<input type="checkbox"/>	2-3 hours	<input type="checkbox"/>
At least weekly	<input type="checkbox"/>	3-4 hours	<input type="checkbox"/>	4-5 hours	<input type="checkbox"/>	5-6hours	<input type="checkbox"/>
At least monthly	<input type="checkbox"/>	6-7 hours	<input type="checkbox"/>	7-8 hours	<input type="checkbox"/>	8-9 hours	<input type="checkbox"/>
At least annually	<input type="checkbox"/>	9-10 hours	<input type="checkbox"/>	>10 hours	<input type="checkbox"/>		<input type="checkbox"/>
		1 day	<input type="checkbox"/>	8 days	<input type="checkbox"/>	15 days	<input type="checkbox"/>
		2 days	<input type="checkbox"/>	9 days	<input type="checkbox"/>	16 days	<input type="checkbox"/>
		3 days	<input type="checkbox"/>	10 days	<input type="checkbox"/>	17 days	<input type="checkbox"/>
		4 days	<input type="checkbox"/>	11 days	<input type="checkbox"/>	18 days	<input type="checkbox"/>
		5 days	<input type="checkbox"/>	12 days	<input type="checkbox"/>	19 days	<input type="checkbox"/>
		6 days	<input type="checkbox"/>	13 days	<input type="checkbox"/>	20 days	<input type="checkbox"/>
		One week	<input type="checkbox"/>	Two weeks	<input type="checkbox"/>	3 or more weeks	<input type="checkbox"/>

How satisfied are you with your participation with family members in these activities? (please circle one)

Very					Very
Dissatisfied					Satisfied
1	2	3	4	5	



Below are seven statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by circling the appropriate number on the line following that item. Please be open and honest in responding.

	1	2	3	4	5	6	7
	strongly disagree	disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree
1. In most ways my family life is close to ideal.	1	2	3	4	5	6	7
2. The conditions of my family life are excellent.	1	2	3	4	5	6	7
3. I am satisfied with my family life.	1	2	3	4	5	6	7
4. So far I have gotten the important things I want in my family life.	1	2	3	4	5	6	7
5. If I could live my family life over, I would change almost nothing.	1	2	3	4	5	6	7
6. Family leisure activities are an important part of our family life.	1	2	3	4	5	6	7
7. Family leisure adds to the quality of my family life.	1	2	3	4	5	6	7

Appendix E

Activity-Feelings States Scale

Please answer these questions from the perspective of **your family** during family recreation activities.

Participating in family recreation makes my family members feel...

	Strongly Disagree			Agree & Disagree Equally			Strongly Agree
Capable	1	2	3	4	5	6	7
Offered Choices What to Do	1	2	3	4	5	6	7
Part of a Team	1	2	3	4	5	6	7
Stressed	1	2	3	4	5	6	7
Free	1	2	3	4	5	6	7
Involved with Friends	1	2	3	4	5	6	7
Pressured	1	2	3	4	5	6	7
Competent	1	2	3	4	5	6	7
I Want to Do This	1	2	3	4	5	6	7
Uptight	1	2	3	4	5	6	7
Brotherly/Sisterly	1	2	3	4	5	6	7
Achieving	1	2	3	4	5	6	7
My Participation is Voluntary	1	2	3	4	5	6	7

Next, please help **your child** to fill out the same questions, but from the perspective of peer interaction. If your child is able to read well by himself, please allow him to complete the questions on his own. If not, please read each item to your child and allow him to dictate the correct response. Before you begin assisting your child, please make sure that he understands the meaning of each item on the scale. If a meaning is unclear, please verbally explain the item to your child in terms that he is familiar with. However, it is VERY important that you do not fill this portion of the survey out for your child, or influence his responses in any way. Thank you!

Playing with my friends outside my school classroom makes me feel...

	Strongly Disagree			Agree & Disagree Equally			Strongly Agree
Capable	1	2	3	4	5	6	7
Offered Choices What to Do	1	2	3	4	5	6	7
Part of a Team	1	2	3	4	5	6	7
Stressed	1	2	3	4	5	6	7
Free	1	2	3	4	5	6	7
Involved with Friends	1	2	3	4	5	6	7
Pressured	1	2	3	4	5	6	7
Competent	1	2	3	4	5	6	7
I Want to Do This	1	2	3	4	5	6	7

Uptight	1	2	3	4	5	6	7
Brotherly/Sisterly	1	2	3	4	5	6	7
Achieving	1	2	3	4	5	6	7
My Participation is Voluntary	1	2	3	4	5	6	7

Note: Scoring as follows

Self-determination subscale: Offered Choices What to Do, Free, I Want to Do This, My

Participation is Voluntary

Competence subscale: Capable, Competent, Achieving

Relatedness subscale: Part of a Team, Involved with Friends, Brotherly/Sisterly

Tension subscale: Stressed, Pressured, Uptight

