
Articles

Adolescent Playfulness, Stress Perception, Coping and Well Being

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The focus of this study was to investigate the relationship between adolescent playfulness, the perception of daily stressors and the coping strategies engaged by adolescents within the context of school and leisure. A mixed method approach was used including semi-structured interviews, scales and survey questionnaires. Two hundred ninety adolescents' ages 12 to 19 participated in the study. Results suggest that playful teens are less prone to experience stress of a personal nature or in relation to their peers. Yet they were more prone to experience stress concerning their future or their parents' future. A number of contextual variations were identified. Playfulness as a personality disposition had significant predictive value pertaining to the adolescents' leisure experience, the perception of daily stressors and overall well being. No significant differences across gender or coping mechanisms (active, internal, and withdrawal) were observed. Contrary to previous assumptions, high playful and low playful teens appear to engage in very similar coping processes for very similar stressors, thus playfulness has a low predictability in terms of adolescent coping. Practical implications of this study are discussed.

KEYWORDS: *Adolescence, playfulness, stress, coping, well being.*

Introduction

The well being of an individual is a dynamic and multidimensional process that is influenced by a reciprocal relationship of internal, dispositional factors as well as external, contextual factors. Findings from past research suggest that playfulness as a dispositional factor may have stress moderating effects on adolescent health and well being (Byrne & Mazanov, 2001; Harkness & Bundy, 2001). The reason for this stipulation stems from research conducted in relation to personality traits closely associated with playfulness. For example, sense of humour (McGhee, 1999), fantasy (Fromberg & Bergen, 1998), happiness (Natvig, Albrektsen & Qvarnstrom, 2003), and extroversion (Matthews, Deary & Whiteman, 2003) have been credited with having

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stress moderating capacities during situations of stress. Research has also shown that playfulness influences adolescents' behaviour and experiences differently depending on personal and social circumstances that arise during leisure, at school or at home (Emmons, Diener & Larsen, 1986; Lieberman, 1975).

The conceptualization and development of this study was guided by developmental theory (i.e. Bronfenbrenner & Ceci, 1994) and the notion that individual traits interact with environmental experiences in determining an individuals' developmental and psychological outcomes. As such, people's behaviour and experiences can best be understood by considering both the influence of the social situation (e.g. leisure, school, culture) and what the person brings (personality disposition, experience) to the situation (Mannell & Kleiber, 1997). Thus, a multi-phase, multi-method study was conducted to gain a better understanding of potential stress moderating capacities of playfulness, as well as to investigate the relationship between playfulness and context. First, a scale was developed to assess adolescent's ratings of their playfulness. For the purpose of this study adolescents are conceptualized as young persons between the ages of twelve and nineteen. Subsequently, a number of relationships were explored between playfulness and perceived sources of stress and coping. Finally, a model was tested to evaluate the relationships between playfulness, stress and coping—within the context of school and leisure—and psychological well being.

Review of Related Literature

Over the years, a number of definitions of play have been used to address different forms of play or focusing on various play settings, as well as diverse play experiences. However, as Barnett (2005) writes, in order to gain a comprehensive understanding of play we also have to focus on the internal qualities of the individual that make play possible. For that reason, the term playfulness has been used to address a person's playful disposition. A person with a playful disposition "is guided by internal motivation, an orientation towards process with self-imposed goals, a tendency to attribute their own meaning to objects or behaviours, a focus on pretence and non-literality, a freedom from externally imposed rules, and active involvement" (Barnett, 1991b, p. 52).

Measuring Playfulness

Play and playfulness have been studied extensively among children in various contexts, however, studies focusing on playfulness in adults and adolescents are less common. Playfulness in children has been identified with numerous developmental benefits (Barnett, 1991a) and as Glynn and Webster (1992, 1993) note playfulness in adults has shown to promote work place satisfaction as well as work productivity. In the past, a range of methods have

been used to both qualitatively and quantitatively measure playfulness in children (Barnett, 1991c; Boyer, 1997; Bundy et al., 2001; Rogers et al., 1998) and adults (Barnett, 2005; Glynn & Webster, 1992), however a review of the published literature revealed a need for a measurement instruments to access playfulness specifically for the adolescent age group. Lightfoot (1997) supports that in order to capture the true essence of a particular construct it is vital that a measuring instrument is developed from the vantage point of the population one intends to assess. Also, in accordance with personality research, McCrae and John (1992) write that it is beneficial to allow individuals to use everyday language and laypersons terms when describing constructs reflective of themselves and others. Hence it is expected that an age appropriate playfulness scale would be superior in capturing this particular personality trait in adolescents compared to an adult or child oriented research instrument.

Lieberman (1971) was one of the pioneers to have studied playfulness in children, and to a limited extent, in adolescents. Over the years, her observational rating scale has been adapted and further developed by several researchers (e.g. Barnett, 1991b; Boyer, 1997; Glynn & Webster, 1992; Witt et al., 1982). Contextual as well as gender and age differences have been observed. For example, Lieberman (1975) compared playfulness in adolescents across structured settings (schools) and unstructured leisure settings (community centres) and concluded that there is a different manifestation of playfulness depending on context. Barnett and Kleiber (1982) assessed playfulness in relation to cognitive abilities and identified some gender differences in children. Also, research with adults showed women to have a tendency to be more socially playful whereas men tend to be more cognitively playful (Costa & McCrae, 1988).

Personality and Playfulness

Traits, according to findings from personality research, are responsible for the majority of a person's behaviour (Lykken & Tellegen, 1993), yet others maintain that child-rearing practices and the larger social and physical contexts in which a child lives and develops are superior influences on individual differences in development and behaviour (Bronfenbrenner & Ceci, 1994). Also, research supports the conclusion that personality is one of the strongest and most consistent predictor of an individuals' subjective well being (Diener, Suh, Lucas & Smith, 1999). For example, in adults, extroversion and neuroticism have been linked to positive and negative affect, and subjective well being (Watson & Clark, 1997). Personality variables identified as indirect stress moderators of mental health and well being in adolescents and most often noted in the leisure literature are: self-esteem (Byrne & Mazanov, 2001), shyness (Hamer & Bruch, 1994), locus of control (Kleiber & Crandall, 1981), and boredom (Caldwell et al., 1999), as well as neuroticism and introversion (Matthews & Deary, 2003).

Stress and Adolescence

At present, playfulness has not been directly associated with stress-moderating capacities for any particular age group. However, studies on the relationship between stress and well being have typically focused on major life events that are low in frequency but high on impact, or they have concentrated on daily stressors that are higher in frequency but have a less severe immediate impact (Hee-og Sim, 2000). Cumulative stress from minor events (micro-stressors) has been found to be more strongly related to physical and psychological disorders than stress from major life events, even if both measures of stress are used in the same study (Felsten, 2002; Seiffge-Krenke, 1995). Leadbeater, Blatt and Quinlan (1995), Seiffge-Krenke (2000) and Hee-og Sim (2000) note that measuring daily stressors is a better indicator of individual adjustment tendencies or human maladjustment than measures focusing on major life events. The reasoning, it is suggested, is that it is not the stress itself but "how people evaluate the relevance of an encounter in terms of actual or potential harm, loss, or challenge" (Felsten, 2002, p. 76), and the options available to the person in dealing with the events. Daily stressors are described by Kanner, Coyne, Schaefer and Lazarus (1981), as "irritating, frustrating, and distressing demands that characterize everyday transactions" (Kanner et al., 1981, p. 3). Examples of daily stressors in relation to adolescents include arguments with peers, friends or family members, pressures from parents, teachers, or bosses, frustrations with romantic relationships, body image or uncertainties about the future (Seiffge-Krenke, 2000).

Lazarus (1999) notes that the level of reactivity to stress is individually and contextually different depending on personality, personal and social resources, as well as the actual research techniques used to measure physical and psychological disorders. Researchers have successfully used the transactional model of stress to identify and examine the self-reported strategies that people use for dealing with demanding situations (Cox & Ferguson, 1991; Zeidner & Endler, 1996). The transactional model incorporates peoples' cognitive processing abilities, environmental demands and individual symptoms of stress. The value of the transactional model in guiding playfulness investigations is that it suggests the need to examine the process involved in the interaction between perceived playfulness, environmental circumstances (e.g. school, home or leisure) and symptoms of stress.

Stress, Gender and Age

The results of several studies point out that certain stressors are more prevalent for specific age groups and across gender (Petersen et al., 1991; Seiffge-Krenke, 1993; Wagner & Compas, 1990). For example, family-related stressors are reported more often by teens during early adolescence (12-14 years old), whereas network and peer-group related stressors seem to occur particularly during mid-adolescence (15-16 years old). In contrast, achieve-

ment and school-related stressors are most commonly reported during late adolescence (17-19 years old) (Wagner & Compas, 1990). Besides, female adolescents overall perceive the same event to be four times more stressful than do males, and females tend to perceive more stress across different domains compared to males (Petersen et al., 1991).

Coping and Adolescence

Although the means of coping appears to be similar for boys and girls (Frydenberg & Lewis, 1993), research from cross-cultural studies on adolescent coping showed three universally distinct coping strategies. They are active coping, internal coping and withdrawal (Seiffge-Krenke, 1995). Seiffge-Krenke (1995) posits that the ratio of active coping (i.e. functional coping) to withdrawal or avoidance coping (i.e. dysfunctional coping) is 4 to 1 (Seiffge-Krenke, 1995). Results from other studies did not show such distinct coping differences among teens (Copeland & Hess, 1995). Rather, the difference seems to lie in the degree to which they seek support and the source of support. Girls are more likely to ask for social support and accept external or therapeutic help compared to boys (Plancherel & Bologini, 1995). Boys tend to rely more on stress reduction activities or diversion techniques such as practicing sports or hobbies (Cheng & Furnham, 2002; Copeland & Hess, 1995; Frydenberg & Lewis, 1993). It is assumed that such gender differences become more pronounced as individuals mature and get older (Seiffge-Krenke, 1995).

Coping and Well Being

Some links between coping and well being have been reliably observed (Cox & Ferguson, 1991; Frydenberg & Lewis, 1993; Plancherel, Bologini & Halfon, 1998; Seiffge-Krenke, 2000). Active coping has been linked to positive adaptation and few depressive symptoms, whereas avoidance coping has been linked to poor adaptation and a much higher level of depressive symptoms (Herman-Stahl et al., 1995). When children reach mid-adolescence, their coping skills may become more autonomous and focused on relaxing and leisure (Plancherel et al., 1998). Although researchers have begun to study the general coping strategies adolescents use, only minimal research has focused on their use of leisure as a coping resource. One exception is a study done by King, Valerius and Collins (1998) that focused on structured recreation programs for at-risk youth. The authors found that structured recreation programs that integrate recreation and educational activities foster positive coping by teaching adolescents coping skills and by educating and informing them about available resources in their community. In general though, there is little information available on how different leisure activities and leisure experiences influence adolescent coping and well being. Playfulness as a potential coping resource (i.e. resiliency factor) during adolescence has not yet been examined.

Purpose of Present Study

The present study was intended to develop and examine a model of the relationship between adolescent playfulness, coping and the perception of daily stress and well being in the context of leisure and school. The analyses were exploratory in nature with the intent of better understanding the role of playfulness as a possible stress-moderating influence—a dispositional resiliency factor—on adolescent well being. It was expected that playfulness would be associated with lower levels of perceived stress in certain life domains and higher levels of stress in others. Also, that playfulness would be associated with psychological well being in the context of leisure but not necessarily in relation to school. The analyses were in part guided by previous research. To develop and test this model the following research questions were addressed. First, do adolescents with higher levels of playfulness differ in their perception of daily stressors and if so do playful adolescents make use of different coping strategies or cope more effectively than less playful teen? Second, is there a relationship between playfulness, leisure lifestyle, school experience, the perception of daily stressors, coping styles and the psychological well being, as well, are gender and age differences observable?

Methods

Research Participants

Data were collected from a total of 290 adolescents that participated in the study, 117 females (41%) and 166 males (59%). Seven individuals did not indicate their gender but were included in the data set. Forty-one participants were enrolled in a local 4-H Club ($n = 24$) and Junior Farmer Leadership Club ($n = 17$). Two hundred forty nine participants were students enrolled in physical education classes in junior high school and senior high school in a southwestern Ontario city. Data was collected through convenience sampling as it was decided by the school boards what schools and classes would participate in the study. The age of participants ranged from 12 to 19 years. For the purpose of certain analyses adolescents were grouped into three age categories; 12 to 14 years old (44%), 15 to 16 years old (23%), and 17 to 19 years old (33%). This categorization was done because a review of the literature suggested that different age groups are typically involved in different patterns of extracurricular and leisure activities. An unequal representation of age and gender distribution of research participants occurred because first, adolescent participation was strictly voluntary, and second, the decision about what schools and classes would participate in the study was that of the local school board.

Methods and Procedures

This study followed a multi-phase, multi-method approach. The first step was to gain a better understanding of playfulness from the vantage point of

the adolescents by asking youth to describe in their own terms the meaning of playfulness across different contexts. A purposive sample of twelve students age 13 to 19 was interviewed. The researcher followed a semi-structured interview process (Kirby & McKenna, 1989) and asked students about the meaning of playfulness at school, at home or during leisure. In addition, students were asked about their perceived importance of playfulness in relation to well being and if they could identify any gender specific manifestations of playfulness across contexts. All interviews were transcribed by the researcher and the responses content analyzed, categorized and transformed into short, verbal statements, and subsequently included in the item pool from which the scale was created. In addition, information from past research on playfulness (i.e. Barnett, 1982, 1984, 1991; Lieberman, 1971,1974) and related constructs (i.e. Fromberg & Bergen, 1998; Matthews, Deary & Whiteman, 2003; McGhee, 1999; Natvig, Albrektsen & Qvarnstrom, 2003) was used to develop supplementary items.

The list of initial items was presented to a panel of adolescents and adults who evaluated the statements for content and face validity. Adults ($n = 4$) were researchers selected based on their familiarity with this line of research. Adolescents (age 13-19; $n = 19$) were a convenience sample. The panel was given the conceptual definitions of playfulness and rated the relevancy and clarity of each item in each dimension. Based on the comments from this panel, adjustments were made to reduce redundancy of statements and to clarify wording and content of items. This process reduced the item pool to 45 items that were subsequently pilot-tested based on a 5-point Likert scale response format with 60 junior high school and high school students (age 13 to 19). Participants for the pilot test were chosen by convenience sampling and were not included in phase two of the study.

Psychometric qualities of the preliminary scale were evaluated. First, internal consistency of the playfulness scale was assessed. Alpha reliability coefficient ($r = .89$) was calculated for the scale and item-total correlations (ranged from .42 to .69) were examined. A series of exploratory factor analyses using SPSS's reliability analysis procedures were carried out. Five factors emerged accounting for 62% of the common variance. Ultimately 20 items with good corrected item-total correlations were selected to construct the adolescent playfulness scale (APF20, $\alpha = .90$).

The APF20 scale was incorporated into a survey questionnaire consisting of other scales that were adapted specifically for this age group [i.e. Leisure Satisfaction Scale by Beard & Ragheb (1983); Bradburn Affect Balance Scale by Bradburn (1965); Problem Questionnaire by Seiffge-Krenke (1995); Coping Across Situations Questionnaire by Seiffge-Krenke (1995)], in addition to research specific questions (e.g. extracurricular involvement, physical and psychological health information etc.). A process of active consent was used to select individual students for participation. After securing parental and student consent, the self-administrated questionnaire was administered by classroom teachers to students in physical education classes in three junior and two senior high schools.

Instrumentation

As such, adolescent *playfulness* was measured with the newly developed 20-item playfulness scale (APF20). The APF20 is structured on a Likert-type response format ranging from 1 “almost never true for me” to 5 “almost always true for me” (e.g. “I like to clown around” or “by being playful it is easier to get along with people”). Perceived *stress* and *coping* was measured with the Problem Questionnaire (PQ, $\alpha = .93$) and the Coping Across Situation Questionnaire (CASQ, $\alpha = .78$). Both scales were developed by Seiffge-Krenke (1995) from the vantage point of adolescents, however all alphas reported here are from the current study. Stressful daily events listed on the PQ are grouped into seven different domains such as school ($\alpha = .80$), future ($\alpha = .75$), parents ($\alpha = .84$), leisure ($\alpha = .70$), peers ($\alpha = .83$), romantic relationships ($\alpha = .74$), and self-related problems ($\alpha = .78$). The PQ is based on a Likert-type response format ranging from 1 “not at all stressful for me” to 5 “extremely stressful for me” (e.g. leisure domain “my parents try to influence how I spend my leisure time”). For the purpose of this study and to reduce the overall length of the questionnaire, only 38 items were included. Coefficient alphas were used to select the 38 items (adapted $\alpha = .93$) from the original 64-item scale (original $\alpha = .84$).

Coping strategies were measured with an adaptation of the CASQ. It was reported in the literature that the CASQ scale necessitates research assistant guidance for successful completion by the youths. Hence, the CASQ was changed (adapted $\alpha = .78$) to a Likert-type scale format (1 = almost never true for me to 5 = almost always true for me) for easier use (e.g. I disclose the problem to my parents or other adults”). Also, participants in the present study evaluated their use of coping strategies independent of problems identified in the different domains (i.e. school, future, parents, peers, romantic relationships, leisure, or oneself). Instead, an overall measure of coping was calculated. Coping measures were further divided into functional coping and avoidance coping to assess its relationship with playfulness. Functional coping is defined as active support seeking (active coping) and an internal consideration of possible solutions (internal coping). Avoidance coping (withdrawal) refers to “the characteristic that the problem at hand is not solved immediately” (Seiffge-Krenke, 1995, p. 95). With the PQ and the CASQ adolescents were able to rate the level of everyday stress they experienced as well as the extent to which they used a variety of coping strategies to deal with these stressors.

In addition, to evaluate the relationship between playfulness and well being a number of health-related variables were measured. Adolescent *well being* was assessed with measures of self-reported physical health and psychological health. *Physical health* is a composite measure based on perceived physical fitness (ranging from 1 = below average to 5 = above average) and perceived physical health (ranging from 1 = poor to 5 = excellent). *Psychological health* is a composite measure including self-confidence (ranging from 1 = very low to 5 = very high), and overall affect (positive affect minus

negative affect) as measured by the Bradburn Affect Balance Scale (Bradburn, 1965).

Also, to assess the relationship between playfulness, leisure and school, and its effect on psychological health, both leisure as well as school related measures were developed. An individual's *leisure lifestyle* was conceptualized as consisting of two dimensions: leisure involvement and leisure satisfaction. Leisure involvement refers to the degree of involvement in various activities (e.g. "how often do you participate in the following activities") that were measured using a Likert-type response format (ranging from 1 "never" participated in the activity to 5 "very often" participated in the activity). The degree of leisure involvement was assessed across seven different groups of leisure activities (adapted from Heintzman & Mannell, 2003); (1) mass media (watching TV & videos, reading magazines or news paper, going to a movie, using the internet), (2) social activities (visiting with friend/s, attending parties, social dancing, indoor games e.g. card games), (3) physical activities (fitness activities, team sports, individual sports, dual sports), (4) cultural activities (attending concerts, visiting arts museum, folk or other dancing, attending theatre, attending festivals), (5) outdoor activities (picnicking, hiking, canoeing, camping, nature study, water sports, skiing or snowboarding, biking, skateboarding), (6) hobbies (painting or drawing, woodworking, collecting things, photography or video making, doing crafts, making music), (7) personal development (reading for pleasure, spiritual practices, attending retreats). The teens' level of leisure activity involvement was subsequently assessed by calculating a mean score across all leisure activities for each participant. *Leisure satisfaction* was measured with an adaptation of the leisure satisfaction scale (Beard & Ragheb, 1983) consisting of 5 different dimensions of leisure satisfaction; psychological, educational, social, relaxation, physiological. Because no adolescent-specific leisure satisfaction scale was available, an adaptation of the *Leisure Satisfaction Scale* (Beard & Ragheb, 1983) was used. The original leisure satisfaction scale was designed for adults ($\alpha = .93$) and included a sixth dimension called "aesthetic" referring to physical settings in which individuals engage in their leisure activities and that are perceived to varying degrees as pleasing, interesting, beautiful and generally well-designed. It was decided to omit this dimension because it appeared to lack relevancy to the adolescent age group and the current research questions. For that reason, adolescent leisure satisfaction was assessed with a 20-item scale (adapted $\alpha = .70$), with four items on each subscale.

Results

Perception of Normative (Daily) Stressors and Playfulness

First, correlation and regression analyses were undertaken to assess if adolescents with higher levels of playfulness differed from less playful teens in their perception of daily stress. Analysis showed no significant difference in the degree of stress between the two groups rather, differences existed in

the type of stress that was perceived (Table 1). Differences measured were rather small (variance explained ranged from .5% to 14%), playful teens in comparison to less playful teens seem to mainly experience stress from problems stemming with their parents ($\beta = .15, p < .05$) and a concern for their future ($\beta = .18, p < .001$). In contrast, playful teens seem to perceive significantly less stress with issues of a personal nature ($\beta = -.19, p < .001$) or in relation to their peers ($\beta = -.13, p < .05$) (see Table 2).

Second, hierarchical regression analyses were carried out to calculate the relationship between the seven domains of stress and playfulness, controlling for age and gender. There were no significant age differences observed and the only significant gender difference that could be measured was for future related stressors. Females seem to perceive more stress related to the future compared to their male counterparts ($\beta = -.16, p < .05$) (Table 2).

Coping with Normative (Daily) Stress and Playfulness

The next step was to evaluate the different coping styles used by adolescents by analysing responses to the subscales of the CASQ into active coping, internal coping and withdrawal. To verify the items allocated for the three coping styles an exploratory factor analysis of the CASQ scale was conducted. Three factors extracted coincided with the three coping styles identified by the author (Seiffge-Krenke, 1995). Subsequent correlational analyses showed that teens used active coping ($r = .32, p < .001$), internal coping ($r = .26, p < .001$) and withdrawal coping ($r = .33, p < .001$) to deal with normative stress (Table 3). Based on results from the correlation data, it appears that the more stress teens experienced, the more they attempted to use a variety of coping strategies. Also, playful teens are more likely to use withdrawal coping particularly when dealing with problems linked to leisure

TABLE 1
The Seven Problem Domains and Playfulness (Mean, Correlation)

| Types of Stressors | Low playfulness mean | High playfulness mean | Correlation between high/low PF |
|---|-------------------------|--------------------------|------------------------------------|
| Problems related to Leisure | 2.5 | 2.7 | -.022ns |
| Problems related to Parents | 2.0 | 2.0 | .127ns |
| Problems related to Future | 2.1 | 2.3 | .147* |
| Problems related to Peers | 1.9 | 1.6 | -.155* |
| Problems related to romantic Relationships | 2.0 | 2.1 | .034ns |
| Problems related to School | 2.2 | 2.3 | .043ns |
| Problems related to Self | 2.1 | 1.8 | -.155* |
| Problems average | 2.1 | 2.1 | .010ns |

* $p < 0.05$

TABLE 2
The Seven Problem Domains and Playfulness (Correlation, Regression)

| Problem Domains | Playfulness (<i>r</i>) | Regression Coefficients (Standardized Beta values) | | |
|--|-----------------------------|---|----------------------|---------------|
| Problems related to Leisure | .000 $_{ns}$ | gender | $\beta = .059$ | $R^2 = -.007$ |
| | | age | $\beta = -.003$ | |
| Problems related to Parents | .137* | PF | $\beta = .006$ | $R^2 = .014$ |
| | | gender | $\beta = .010$ | |
| Problems related to Future | .196** | age | $\beta = .048$ | $R^2 = .046$ |
| | | PF | $\beta = .149^*$ | |
| Problems related to Peers | -.134* | gender | $\beta = -.158^*$ | $R^2 = .005$ |
| | | age | $\beta = .004$ | |
| Problems related to romantic Relationships | .015 $_{ns}$ | PF | $\beta = .179^{**}$ | $R^2 = .005$ |
| | | gender | $\beta = -.011$ | |
| Problems related to School | .062 $_{ns}$ | age | $\beta = -.022$ | $R^2 = -.002$ |
| | | PF | $\beta = -.133^*$ | |
| Problems related to Self | -.173** | gender | $\beta = -.100$ | $R^2 = .038$ |
| | | age | $\beta = -.062$ | |
| Problems average | .002 $_{ns}$ | PF | $\beta = .007$ | $R^2 = .038$ |
| | | gender | $\beta = .003$ | |
| | | age | $\beta = .070$ | |
| | | PF | $\beta = .063$ | |
| | | gender | $\beta = -.110$ | |
| | | age | $\beta = .041$ | |
| | | PF | $\beta = -.191^{**}$ | |
| | | gender | $\beta = -.060$ | |
| | | age | $\beta = .023$ | |
| | | PF | $\beta = -.004$ | |

** $p < 0.001$

* $p < 0.05$

($r = .29, p < .001$), parents ($r = .22, p < .001$), school ($r = .19, p < .001$) and self ($r = .38, p < .001$). However, to deal with problems that occur with their peers ($r = .28, p < .001$) or with regard to a romantic relationship ($r = .41, p < .001$) teens seemed to use active coping. Internal coping was used for problems concerning the future ($r = .17, p < .001$) (Table 3).

A set of hierarchical regression analyses was performed to control for age and gender. No significant age differences were observed in the relationship between playfulness and the use of various coping styles. However, gender differences were identified in that females appear to engage more in active coping ($\beta = .27, p < .001$) compared to males. No significant association was found for the extent to which internal coping and withdrawal was used across age and gender. Contrary to observations reported by Frydenberg and Lewis (1993), age was not significantly associated with the way in which the teens in this study dealt with normative stressors. However, a

TABLE 3
The Seven Problem Domains by Coping Styles with Playful Adolescents
(Correlations)

| Problem Domains | Active Coping (r) | Internal Coping (r) | Withdrawal (r) |
|--|----------------------|------------------------|-------------------|
| Problems related to Future | .148** | .167** | .043 <i>ns</i> |
| Problems related to Leisure | .234** | .186** | .287** |
| Problems related to Parents | .100* | .137** | .222** |
| Problems related to Peers | .277** | .213** | .234** |
| Problems related to romantic Relationships | .407** | .158** | .268** |
| Problems related to School | .127* | .123* | .188** |
| Problems related to Self | .292** | .229** | .378** |
| Problems average | .318** | .255** | .330** |

** $p < 0.001$

* $p < 0.05$

significant gender difference was found for active coping in that females are more likely to use active coping compared to males (Table 4).

Relationships between Playfulness, Stress and Coping During Leisure and School

Bivariate analyses suggested that a positive relationship exists between psychological health and positive school attitudes ($r = .41, p < .001$) (school attitude is a composite measure of 5 different variables measured with a 5-

TABLE 4
Coping Styles and Playfulness (Correlations, Regressions)

| Coping Styles | Playfulness (r) | Regression Coefficients (Standardized Beta values) | |
|-----------------|--------------------|---|----------------------|
| Active Coping | .293** | gender age | $\beta = -.265^{**}$ |
| | | PF | $\beta = -.052$ |
| | | | $\beta = .268^{**}$ |
| Internal Coping | .207** | gender age | $\beta = -.092$ |
| | | PF | $\beta = -.026$ |
| | | | $\beta = .195^{**}$ |
| Withdrawal | .262** | gender age | $\beta = -.057$ |
| | | PF | $\beta = -.097$ |
| | | | $\beta = .246^{**}$ |

** $p < 0.001$

* $p < 0.05$

point Likert-scale—importance of doing well at school, satisfaction with school performance, like to go to school, consider future education important). As well, that a positive relationship exists between psychological health and leisure participation ($r = .34, p < .001$) and leisure satisfaction ($r = .64, p < .001$). The bivariate analyses also indicated that playfulness was positively related to psychological health ($r = .30, p < .001$) and physical health ($r = .21, p < .001$).

Path models were developed to test the relationships of the following variables; playfulness, leisure participation, leisure satisfaction, stress and coping and psychological health and the second, playfulness, extra curricular involvement, school attitude, stress and coping and psychological health. The analysis was exploratory and playfulness was conceptualized as potentially influencing psychological health through its influence on leisure participation and leisure satisfaction, on the one hand, and extra curricular involvement and attitudes toward school on the other. In Figure 1, the path analysis of the stress-well being model illustrates the relationships found to exist among the variables playfulness, leisure participation, leisure satisfaction, perceived stress and psychological health. As can be seen, playfulness was not related directly to either perceived stress or psychological health. However, higher levels of playfulness were related to higher levels of leisure participation ($\beta = .37, p < .001$) and leisure satisfaction ($\beta = .54, p < .001$), which in turn, were related to psychological health ($\beta = .15, p < .01$ and $\beta = .21, p < .005$ respectively). As expected, the more stress adolescents perceived the lower their level of psychological health ($\beta = -.39, p < .001$). Stress was also significantly related to leisure participation ($\beta = .16, p < .01$) but it is not clear from these analyses, if increased stress is due to increased leisure participation or if adolescents engage in more leisure to deal with

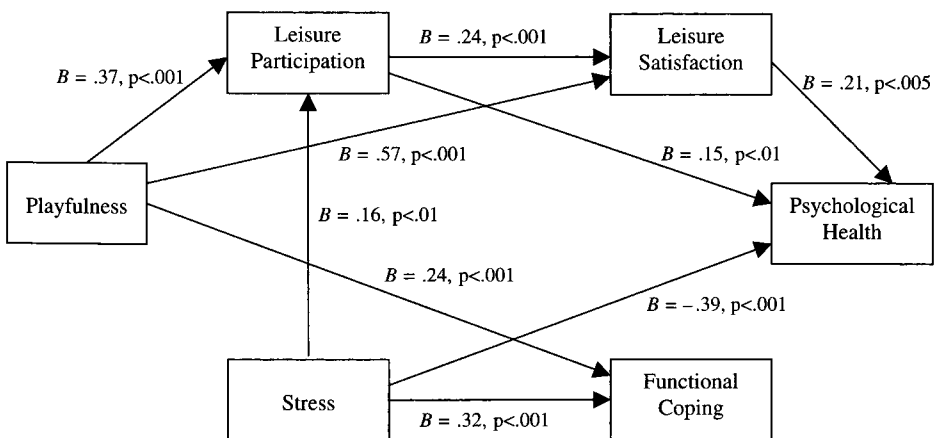


Figure 1. Playfulness, stress, leisure participation, leisure satisfaction, functional coping (active and internal) and psychological health.

increased levels of stress. It is understood in this model that stress triggers increased leisure participation as a way of coping, an observation made by teens during initial interviews.

In a subsequent path analysis, functional coping was replaced with avoidance coping in the model. The patterns were essentially the same for functional coping and avoidance coping. There was a significant association between playfulness and avoidance coping ($\beta = .24, p < .001$), leisure participation ($\beta = .37, p < .001$) and leisure satisfaction ($\beta = .57, p < .001$), but the relationships between playfulness and stress and playfulness and psychological health were not statistically significant ($p > .05$). The analyses of the path models suggest that playfulness as a personality disposition has strong direct relationships with adolescent leisure participation, leisure satisfaction and coping. However, contrary to expectations, adolescent playfulness does not appear to have a prominent role in terms of the teens perception of normative stress. Nevertheless playfulness showed a significant indirect relationship with adolescents' psychological health due to its positive relationship with leisure participation and leisure satisfaction. Although playful teens engaged in functional as well as avoidance coping styles, when faced with normative stress, higher levels of coping were unrelated to the adolescents' psychological health.

Discussion and Conclusions

Findings from past research have suggested that playfulness may have stress moderating effects on adolescent health and well being due, in part, to secondary personality traits that are closely associated with playfulness and that were positively identified as having stress moderating capacities (Boyer, 1997; Martin et al., 1993; Saunders et al., 1999). The findings of this study provide only partial support for this proposition. The analyses showed that playful adolescents have an overall high level of self-confidence and feel good about their health and physical fitness, but on the whole they do not experience normative stress any more or less frequently than less playful adolescents. The difference seems to be in the types of problems they perceive stressful rather than the degree of stress.

The question is how different stressors influence the adolescents' psychological health. As previously stated, it is not the stress itself but how people evaluate the significance of a problem and the perceived options available in dealing with the event that determines a person's well being (Lazarus & Folkman, 1991; Printz et al., 1999). This question is beyond the scope of this study, however, findings suggest that adolescents used all three coping styles (active, internal and withdrawal) assessed by the CASQ regardless of level of playfulness. Playful adolescents are slightly more likely to use withdrawal, sometimes seen as a dysfunctional type of coping, than functional coping (active and internal coping), but the two coping styles were not directly associated with psychological health. Hauser and Bowlds (1990) proposed that both types of coping could be adequate responses to a particular

situation even though withdrawal deals with the symptom rather than the causes. The authors suggest that this may not be inherently bad and can even contribute to an emotional equilibrium because it is important to consider that a coping style is not good or bad or functional or dysfunctional, rather a coping style is context and time dependent.

Playful adolescents used all three coping styles in response to all seven domain stressors. Active coping was most strongly associated with problems concerning peers and romantic relationships, suggesting that they felt fairly confident in dealing with these issues directly. Withdrawal coping was the coping style with the strongest association to problems related to leisure, parents, school, and self, signifying that developmentally this group of adolescents may still be "sorting out" how best to deal with the aforementioned problems. Hence they did not deal with these issues in a direct manner (proportionately there were a greater number of younger adolescents and more males participating in this study, which might be a reason why more withdrawal coping was used). The analyses also suggest that coping style per se has no direct relationship with psychological health, at least for the participants in this study. Though the bivariate analyses indicated that playfulness and psychological health are linked, the path models suggest that playfulness is indirectly linked to psychological health through leisure participation, leisure satisfaction and positive school attitudes.

An additional factor to take into account in the stress-well being relationship is the influence of age and gender. As individuals get older, increased cognitive complexity and social maturity lead to different coping processes, which have been identified by several investigators (Copeland & Hess, 1995; Herman-Stahl, Stemmler & Petersen, 1995) as a central aspect of the relationship between adolescent coping and well being. In general, it is argued that as adolescents get older they tend to increase their use of active and internal coping processes when faced with normative stressors (Costa & McCrae 1994; Seiffge-Krenke, 1993). The results from the present study do not support this trend. In terms of gender, previous researchers have found that females engage in more active coping than males (Seiffge-Krenke, 1993). The findings of the current study support this gender difference. Females were more likely to use an active coping approach when dealing with normative stressors than males. Playfulness was not found to have any significant direct association with coping style.

Study Limitations

There are some limitations to this study such as the demographic background of the participants (predominantly pre-adolescent i.e. 44% age 12 to 14; 23% age 15 to 16; 33% age 17 to 19, white, middle class youth), the measuring tools used to assess the different key variables (e.g. the APF20 needs further development, e.g. reliability, concurrent validity) and also the fact that the path analyses only allowed unidirectional relationships to be represented and assessed in the model. As was mentioned for the stress well

being model (Figure 1), the direction of the relationship between leisure participation and perceived stress was unclear. However, various researchers (e.g. Davis et al., 1995; Lyng, 1990; Schueller, 2000) have suggested that adolescents engage in more leisure in order to lessen the negative effects of daily stressors. In reality, over-involvement or under-involvement in leisure activities may in fact be the cause of increased stress (Coakley, 1992; Robinson & Godby, 1993). It is also possible that leisure provides opportunities for palliative coping among adolescents, a form of coping that was not measured with the current coping scale. Furthermore, an issue not addressed in this study is the influence of negative leisure and risk recreation as a cause for increased stress and decreased psychological health during adolescence (e.g. Adams, 1999; Arnett, 1992; Gonzalez et al., 1994; Jackson et al., 1997; Mahoney & Stattin, 2000; Quadrel et al., 1993; Zuckerman, 1991).

Future Research

The current study was exploratory in nature and was conducted for the purpose of gaining further information on adolescent playfulness and the perception of daily stressors and coping. Thus a number of questions have emerged as a result of this research. For example, what are motivating factors during early development and childhood socialization that encourage or contribute to the development of the playfulness disposition in adolescence? Both retrospective and longitudinal research are needed to assess the influence of various childhood play and leisure opportunities, as well as interactions with parents and peers on the level of playfulness and its relationship with wellness. Such research could also examine the stability of playfulness as a disposition over time and across developmental stages. Attention should also be given to the potential relationship between playfulness and extroversion. Playful individuals show similar behavioural traits as are described in the literature for extraversion (Diener et al., 1999). Extroverted individuals are more outgoing, gregarious, socially and often physically active people compared to introverted individuals. While the mental playfulness component of the playfulness construct does not seem to be conceptually related to the idea of extroversion, the playfulness-extroversion relationship needs further exploration and its distinctiveness established.

In summary, the analyses suggest that playfulness has mainly an indirect effect on adolescents' psychological health. The models examined suggest that playfulness is associated with psychological health through its influence on leisure participation and leisure satisfaction, and through its positive association with more positive school attitudes. No relationship was observed between the coping styles of playful adolescents and psychological health.¹

¹It should be noted that the joint or interaction effects of playfulness and stress, playfulness and coping, and stress and coping on psychological and physical health were examined using regression procedures. However, no significant interaction effects were found.

References

- Adams, G. R. (1999). At-risk adolescents: A broader view of context. *Journal of Adolescent Research, 14*, 133-134.
- Arnett, J. (1992). Reckless behavior in adolescence: A developmental perspective. *Developmental Review, 12*, 339-373.
- Barnett, L. (2005). Focusing on the player: Defining and measuring playfulness in young adults. Unpublished manuscript.
- Barnett, L. (1991a). Developmental benefits of play for children. In B. L. Driver, P. J. Brown, & G. L. Peterson (Eds.), *Benefits of leisure* (pp. 215-247). State College PA: Venture Publishing Inc.
- Barnett, L. (1991b). Characterizing playfulness: Correlates with individual attributes and personality traits. *Play and Culture, 4*, 371-393.
- Barnett, L. (1991c). The playful child: Measurement of a disposition to play. *Play and Culture, 4*, 51-74.
- Barnett, L., & Kleiber, D. (1984). Playfulness and the early play environment. *Journal of Genetic Psychology, 144*, 153-164.
- Barnett, L., & Kleiber, D. (1982). Contaminants of playfulness in early childhood: Cognitive abilities and gender. *The Journal of Genetic Psychology, 141*, 115-127.
- Beard, J., & Ragheb, M. (1983). Measuring leisure motivation. *Journal of Leisure Research, 15*, 219-228.
- Boyer, W. (1997). Enhancing playfulness in sensorial stimulation. *Journal of Research in Childhood Education, 12*, 78-87.
- Bundy, A., Nelson, L., Metzger, M. & Bingaman, K. (2001). Validity and reliability of a test of playfulness. *Occupational Therapy Journal of Research, 21*, 276-284.
- Bradburn, N. (1965). *The structure of psychological well being*. Chicago, IL: Aldine.
- Bronfenbrenner, U., & Ceci, S. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review, 101*, 568-586.
- Byrne, D., & Mazanov, J. (2001). Self-esteem, stress and cigarette smoking in adolescents. *Stress and Health, 17*, 105-110.
- Caldwell, L., Darling, N., Payne, L., & Dowdy, B. (1999). "Why are you bored?": An examination of psychological and social control causes of boredom among adolescents. *Journal of Leisure Research, 31*, 103-121.
- Cheng, H., & Furnham, A. (2002). Personality, peer relations, and self-confidence a predictor of happiness and loneliness. *Journal of Adolescence, 25*, 327-339.
- Coakley, J. (1992). Burnout among adolescent athletes: A personal failure or social problems? *Sociology of Sport Journal, 9*, 271-285.
- Copeland, E., & Hess, R. (1995). Differences in young adolescents' coping strategies based on gender and ethnicity. *Journal of Early Adolescence, 15*, 203-219.
- Costa, P., & McCrae, R. (1988). From catalogue to classification: Murry's needs and the five-factor model. *Journal of Personality and Social Psychology, 55*, 258-265.
- Costa, P., & McCrae, R. (1994). Stability and change in personality from adolescence through adulthood. In C. Halverson, G. Kohnstamm, & R. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 139-155). Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Cox, T., & Ferguson, E. (1991). Individual differences, stress and coping. In C. Cooper, & R. Payne (Eds.), *Personality and stress: Individual differences in the coping process* (pp. 7-32). Chichester: Wiley.
- Davis, D., Ray, J., & Syles, C. (1995). Rope course training for youth in a rural setting: "At first I thought it was going to be boring". *Child and Adolescent Social Work Journal, 12*, 443-463.

- Diener, E., Suh, E., Lucas, R., & Smith, H. (1999). Subjective well being: Three decades of progress. *Psychological Bulletin*, *125*, 276-302.
- Emmons, R., Diener, E., & Larsen, R. (1986). Choice and avoidance of everyday situations and affect congruence: Two models of reciprocal interactionism. *Journal of Personality and Social Psychology*, *51*, 815-826.
- Felsten, G. (2002). Minor stressors and depressed mood: Reactivity is more strongly correlated than total stress. *Health and Stress*, *18*, 75-81.
- Fromberg, D. & Bergen, D. (Eds.). (1998). *Play from birth to twelve and beyond: Contexts, perspectives, and meanings*. New York: Garland Publishers.
- Frydenberg, E., & Lewis, R. (1993). Boys play sport and girls turn to others; Age, gender and ethnicity as determinants of coping. *Journal of Adolescence*, *16*, 253-266.
- Glynn, M. A., & Webster, J. (1992). The adult playfulness scale: An initial assessment. *Psychological Reports*, *71*, 83-103.
- Glynn, M. A., & Webster, J. (1993). Refining the nomological net of the adult playfulness scale: Personality, motivational, and attitudinal correlates for highly intelligent adults. *Psychological Reports*, *72*, 1023-1026.
- Gonzalez, J., Field, T., Yando, R., Gonzalez, K., Lasko, D., & Bendell, D. (1994). Adolescents' perceptions of their risk-taking behavior. *Adolescence*, *29*, 701-709.
- Hamer, R. J., & Bruch, M. A. (1994). The role of shyness and private self-consciousness in identity development. *Journal of Research in Personality*, *28*, 436-452.
- Harkness, L., & Bundy, A. (2001). The test of playfulness and children with physical disabilities. *Occupational Therapy Journal of Research*, *21*, 73-89.
- Hauser, S., & Bowlds, M. (1990). *At the threshold: The developing adolescents*. Cambridge, MA: Harvard University Press.
- Hee-og Sim. (2000). Relationship of daily hassles and social support to depression and antisocial behaviour among early adolescents. *Journal of Youth and Adolescence*, *29*, 647-659.
- Heintzman, P., & Mannell, R. (2003). Spiritual functions of leisure and spiritual well being: Coping with time pressure. *Leisure Sciences*, *25*, 207-230.
- Herman-Stahl, M., Stemmler, M., & Petersen, A. (1995). Approach and avoidant coping: Implications for adolescent health. *Journal of Research in Adolescence*, *24*, 649-665.
- Jackson, S., Born, M., & Jaccob, M. (1997). Reflections on risk and resilience in adolescence. *Journal of Adolescence*, *20*, 609-616.
- Kanner, A., Coyne, J., Schaefer, C., & Lazarus, R. (1981). Comparison of two models of stress measurement: Daily hazels and uplifts versus major life events. *Journal of Behavioral Medicine*, *4*, 1-39.
- King, T. C., Valerius, L., & Collins, J. R. (1998). Ground Zero: A collaborative substance abuse prevention and intervention program for at-risk adolescents. *Journal of Park and Recreation Administration*, *16*, 81-94.
- Kirby, S. & McKenna, K. (1989). *Experience, research, social change: Methods from the margins*. Toronto: Gramond Press.
- Kleiber, D., & Crandall, R. (1981). Leisure and work ethics and locus of control. *Leisure Sciences*, *4*, 477-485.
- Lazarus, R., & Folkman, S. (1991). *Stress, appraisal, and coping*. New York: Springer.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York: Springer.
- Leadbeater, B., Blatt, S., & Quinlan, D. (1995). Gender-linked vulnerability to depressive symptoms, stress, and problem behaviors in adolescents. *Journal of Research on Adolescents*, *103*, 302-315.
- Lieberman, J. N. (1971). *Playfulness and creativity: Some developmental and situational aspects*. (ERIC Document Reproduction Service No. ED 050368, 1-10).

- Lieberman, J. N. (1974). *Exploration in teacher characteristics: Playfulness in the classroom teacher*. (ERIC Document Reproduction Service No. ED 083215, 1-15).
- Lieberman, J. N. (1975). Playfulness, cognitive style, and leisure, or "Do we need to educate for leisure"? (ERIC Document Reproduction Service No. ED 119070, 1-10).
- Lightfoot, C. (1997). *The culture of adolescent risk-taking*. USA: The Guilford Publications, Inc.
- Lykken, D. T., & Tellegen, A. (1993). Heritability of interests: A twin study of mate selection. *Journal of Personality and Social Psychology*, *65*, 56-68.
- Lyng, S. (1990). Edgework: A social psychological analysis of voluntary risk taking. *American Journal of Sociology*, *95*, 851-886.
- Mahoney, J. L., & Stattin, H. (2000). Leisure activities and adolescent antisocial behavior: The role of structure and social context. *Journal of Adolescence*, *23*, 113-127.
- Mannell, R. C., & Kleiber, D. A. (1997). *A social psychology of leisure*. State College, PA: Venture Publishing, Inc.
- Martin, R., Kuiper, N., Olinger, J., & Dance, K. (1993). Humor, coping, with stress, self-concept, and psychological well being. *Humor*, *6*(1), 89-104.
- Mathews, G., Deary, I. & Whiteman, M. (2003). *Personality traits* (2nd ed.). Cambridge, UK: Cambridge University Press.
- McCrae, R. & John, O. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, *60*, 175-215.
- McGhee, P. (1999). *Health, healing and the amuse system: Humor as survival training*. Dubuque, Iowa: Kendall/Hull Publishers.
- Natvig, G., Albrektsen, G., & Qvarnstrom, U. (2003). Associations between psychosocial factors and happiness among school adolescents. *International Journal of Nursing Practice*, *9*, 166-175.
- Petersen, A., Sarigiani, P., & Kennedy, R. (1991). Adolescent depression: Why more girls? *Journal of Youth and Adolescence*, *20*, 247-271.
- Plancherel, B., & Bolognini, M. (1995). Coping and mental health in early adolescence. *Journal of Adolescence*, *18*, 459-474.
- Plancherel, B., Bolognini, M., & Halfon, O. (1998). Coping strategies in early and mid-adolescence: Differences according to age and gender in a community sample. *European Psychologist*, *3*, 192-201.
- Printz, B., Shermis, M., & Webb, P. (1999). Stress-buffering factors related to adolescent coping: A path analysis. *Adolescence*, *34*, 715-734.
- Quadrel, M., Fischhoff, B., & Davis, W. (1993). Adolescent (in)vulnerability. *American Psychologist*, *48*, 102-116.
- Robinson, J. P., & Godbey, G. (1993). Sport, Fitness and the Gender Gap. *Leisure Sciences*, *15*, 291-307.
- Rogers, C., Impara, J., Frary, R., Harris, T., Meeks, A., Semanic-Lauth, S., & Reynolds, M. (1998). Measuring playfulness: Development of the child behaviors inventory of playfulness. *Play and Culture*, *1*, 121-135.
- Saunders, I., Sayer, M., & Goodale, A. (1999). The relationship between playfulness and coping in preschool children: A pilot study. *The American Journal of Occupational Therapy*, *53*, 221-226.
- Schueller, G. (2000, April 29). Thrill or Chill. *New Scientist Publications*: London UK, p. 21-24.
- Seiffge-Krenke, I. (2000). Causal links between stressful events, coping style, and adolescent symptomatology. *Journal of Adolescence*, *23*, 675-691.
- Seiffge-Krenke, I. (1995). *Stress, coping, and relationships in adolescence*. Mahwa, New Jersey: Lawrence Erlbaum Associates.
- Seiffge-Krenke, I. (1993). Coping behavior in normal and clinical samples: More similarities than differences? *Journal of Adolescence*, *16*, 285-304.

- Wagner, B., & Compas, B. (1990). Gender, instrumentality and expressivity: Moderators of the relation between stress and psychological symptoms during adolescence. *American Journal of Community Psychology, 18*, 383-406.
- Watson, D., & Clark, L. (1997). Extraversion and its positive emotional core. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 767-793). San Diego: Academic Press.
- Witt, P., Ellis, G., & Aguilar, T. (1982). Playfulness scale.
- Zeidner, M., & Endler, N. (1996). *Handbook of coping: Theory, research, applications*. New York: Wiley.
- Zuckerman, M. (1991). Sensation seeking: The balance between risk and reward. In L. P. Lipsitt, & L. L. Mitnick (editors), *Self-regulatory behavior and risk taking: causes and consequences* (pp. 143-152). USA: Ablex Publishing Company.