RESEARCH ARTICLE

Adolescent Health, Stress and Life Satisfaction: The Paradox of Indulgent Parenting

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Abstract

A survey of adolescents aged 15 to 16 years was used to examine the relationship between their perceptions of indulgent parenting and adolescent weight status to overall satisfaction with life, as associated with adolescent perceptions of body image, health and stress. In addition, perceptions of parental indulgence were examined in terms of their association with adolescent eating behaviours and health. The results revealed a paradox related to indulgent parenting, with both positive and negative outcomes for adolescents. Structural equation analyses showed that parental indulgence was not only related to lower stress and higher life satisfaction, but also to unhealthy eating behaviours. Path analysis indicated that both positive and negative eating outcomes for adolescents were related to parental indulgence. This research has many implications for both parent and adolescent health education, focusing on parenting styles, stress and healthy lifestyles. Copyright © 2011 John Wiley & Sons, Ltd.

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Life satisfaction is a key issue in the lives of adolescents and emerging adults (Frisch, 2000; Gilman & Huebner, 2003; Greenspoon, & Saklofske, 2001). A variety of stressors that take place during this developmental period, such as academic pressures and increasing independence from parents, may contribute to feelings of alienation, disenfranchisement and dissatisfaction often reported by youth. Larson (2000) suggests that some of this disenfranchisement is due to a deficiency in positive development, both physiological and psychological. Thus, it is important to study the multifaceted relationships involved in adolescent life satisfaction.

Currently, two emerging societal trends have the potential to affect adolescents' life satisfaction. Firstly, parents increasingly practise indulgent parenting, consisting of *too much* or giving children too many resources ranging from food to entertainment, *overnurturing* or doing things for children that they should be doing for themselves, and *soft structure* or setting few rules or consequences for children's behaviours (Clarke, Dawson & Bredehoft, 2004). Although parental indulgence has often been referred to as 'over-indulgence' (Clarke et al., 2004), in reality, indulgence is a continuum. Indulgence involves doing or having so much of something that it does active harm and/or prevents individuals from developing self-efficacy and achieving their full potential. In retrospective studies, individuals who report being indulged as children have noted that they experienced a range of feelings such as love, confusion, guilt, and sadness and anxiety due to feeling they did not learn how to manage certain tasks or decisions well in comparison with peers who were not indulged (Bredehoft, Mennicke, Potter & Clarke, 1998). Whereas youth may feel satisfaction from indulgence, it may also have a detrimental relationship to their well-being over time, specifically in relation to stress and overall health.

Secondly, changes in the health status of today's youth are becoming increasingly evident. The prevalence of overweight adolescents has tripled in the last 30 years, with 17% of adolescents now overweight (Centers for Disease Control, 2007; International Food Information Council, 2006). Being overweight leads to risk factors for heart disease such as high cholesterol, blood pressure and type 2 diabetes, along with social discrimination, poor self-esteem, body image and depression (US Department of Health and Human Services, 2007). Such detrimental consequences resulting from increases in weight status, at a developmental

time when social connections and body image are so important to adolescent self-esteem, have the potential to result in devastating decreases in adolescent life satisfaction. With rising rates of both indulgent parenting and adolescent obesity, the purpose of this paper was to examine the association between indulgent parenting and adolescent outcomes, including health, stress and overall life satisfaction. Related to such adolescent outcomes, adolescents' gender, weight status, body image and eating behaviours were also included to examine their influence on such an association.

Understanding the lives of adolescents

Life satisfaction is the cognitive component of subjective well-being (Andrews & Withey, 1975). When determining life satisfaction, individuals assess the quality of their lives as judged by their own set of criteria (Shin & Johnson, 1978). The degree to which individuals perceive that they have lived up to their self-imposed set of standards will determine their life satisfaction. When evaluating life satisfaction, individuals apply different weights to components, such as health or relationships. Adolescents often struggle with biological, social and parental transitions that can influence the different weights they give to the components that comprise their life satisfaction. Indulged children are given a disproportionate quantity of family resources of money, time and food that appear to meet the child's needs but really do not (Clarke et al., 2004). Therefore, indulged children often do not know how to do things that others can do, expect others to be responsible for them and experience stress from not knowing what is 'enough'. Although adolescents may perceive these actions as contributing positively to their satisfaction with life, the results of these behaviours can be severely detrimental to an individual in the long term. In adulthood, indulged children report symptoms, such as overeating, overspending and experiencing problems with interpersonal boundaries and decision-making (Bredehoft et al., 1998).

Adolescence is a period of reflection and awareness of body image, appearance and health that all can influence life satisfaction. The acquisition of a positive body image has been classified as one of the central developmental tasks of adolescence (Havinghurst, 1972). In addition, adolescence is a period of intensified worry about the shape and size one's body will take in adulthood (ter Bogt et al., 2006). With the rising rates of obesity conflicting with the ideals of leanness supported by the media, adolescents are confronted with demands for thinness that are difficult to acquire. Furthermore, adolescents who are dissatisfied with their body image are more likely to have negative health perceptions (Meland, Haugland & Breidablik, 2007), which in turn can lead to low self-esteem, low social functioning and signs of depression (Field, 2004). Along with these factors, adolescents also are experiencing high levels of stress related to the demands of a high-pressure, fast-paced culture that has been associated with high levels of obesity, physical inactivity and other health compromising behaviours (Allison, Adlaf, Ialomiteanu & Rehm, 1999; Mellin, Neumark-Sztainer, Story, Ireland & Resnick, 2002). Together, stressors such as body weight, along with the resources of having a positive body image and positive health perceptions, may influence the adolescents' perception of their life stress and their overall satisfaction with life.

Parental indulgence may have both positive and negative influences on adolescents' eating behaviours. Parents can serve as both role models and sources of guidance for children by providing a family environment that fosters healthy (or unhealthy) practices related to weight-control issues. Parental behaviours such as both under-control and over-control have been associated with unfavourable child outcomes (Golan & Crow, 2004). However, studies exploring the relationship between parental indulgence and adolescent eating behaviours have been contradictory. For example, one study found that children who described their parents as indulgent consumed more fruit and had more positive attitudes about eating fruit than adolescents from authoritarian or neglectful homes (Kremers, Brug, de Vries & Engels, 2003). Other studies have noted that adolescents raised in more permissive families ate more fat, sweet foods and less healthy foods than those who reported having more rules and boundaries (De Bourdeaudhuij, 1997; De Bourdeaudhuij & Van Oost, 2000). Long-term reports of parental indulgence suggest that in adulthood, these children have trouble regulating their eating behaviours, resulting in patterns of overconsumption (Bredehoft et al., 1998). Because of the positive and negative eating-related outcomes that have been associated with parental indulgent behaviours, it is important to look further at how parental indulgence may relate to both. More specifically, it is necessary to examine the relationship between parental indulgence and positive eating behaviours, such as family dinners and fruit and vegetable intake, as well as negative eating behaviours, such as eating anything desired and fast-food intake.

Gender differences, which may have an impact on the coping mechanisms used by adolescents, have been related to health perceptions. Not only do women consider a broader range of factors when making general ratings of their health, but also being female is often related to lower self-related health status (Benyamini, Leventhal & Leventhal, 2000; Piko, 2007). Gender influences have also been shown when investigating body image. Studies have indicated that young women tend to show greater dissatisfaction with their body image than young boys (Cusumano & Thompson, 2001; Williamson & Delin, 2001). The most prevalent difference in body-image perceptions between the sexes is dissatisfaction with weight and shape, particularly the

hips (Berscheid, Walster & Bohrnstedt, 1973). Moreover, female identity development may be more sensitive to needs, perspectives and relationships with others (Erikson, 1968; Gilligan, 1987, 1993), suggesting that their health and life satisfaction potentially could be more connected to parents, peers and others than would be the case with boys. Lastly, parenting may differ based on the gender of the adolescent. Previous studies have noted that boys are likely to receive more physical discipline and more rules than do girls (Mahoney, Donnelly, Lewis & Maynard, 2000; Straus & Stewart, 1999). In addition, parents have been found to make food and products more accessible for girls than for boys (Bere, Brug & Klepp, 2007).

Theoretical framework

Family stress theory (FST) was used to understand the relationship of perceived parental indulgence, body mass index (BMI) and stress with perceived satisfaction with life of adolescents (Boss, 2002; McCubbin & McCubbin, 1987). This framework extends and redefines the ABC-X model (Hill, 1949), which comprises three integrated factors that describe the level of organization in families. Although the original model for FST and ABC-X have been in existence for a significant time, the composition of this model is the basis of most family stress models and has survived adaptation with the original formulation remaining intact (Ingoldsby, Smith & Miller, 2004; Weber, 2011).

Family stress theory addresses transitions as 'normal' experiences, which typically include some level of stress. Thus, the notion of a pile-up of demands has been incorporated because individuals and families seldom deal with only a single stressful experience (McCubbin, Cauble & Patterson, 1982; McCubbin & Patterson, 1983). Although we can speak of families under stress, it is actually individuals who deal with stress in their own ways, such as becoming depressed, motivated, frustrated or angry. Within this study, 15- to 16-year-old adolescents comprised the unit of analysis; however, there was an interactive relationship between individuals and their families regarding parental indulgence and weight status because parents often have primary responsibility for purchasing and preparing family meals.

In the ABC-X model, the initial factor 'A', the stressor event, includes a broad range of events that call upon individuals and families to adapt. Parental indulgence is not considered a healthy parenting behaviour. Adults who have experienced parental indulgence report a range of positive and negative feelings such as love, confusion, guilt and sadness (Bredehoft et al., 1998). Because of the mixed emotions connected with indulgent parenting, this construct can be viewed as a stressor in adolescents' lives. In addition, high BMI may add to adolescent stress due to its implications for the health and well-being of adolescents. Thus, within this study, adolescents comprised the unit of analysis, whereas indulgent parenting and BMI scores were classified under the 'A' factor.

The second factor, 'B', comprises the resources, internal and external as well as tangible and intangible, that individuals and families have at their disposal to buffer the impact of stressor events. Adolescents' self-perceptions, specifically related to their health and body image, can act as a buffer or coping mechanism to help ward off some of the stress related to indulgence and BMI. Having negative health perceptions has been linked to low self-esteem, social functioning and signs of depression. Low body image has been associated with higher rates of depression and lower life satisfaction; having higher perceptions of health and body image may be positively related to the life satisfaction of adolescents. Together these resources may interact with stressors and be linked to the life satisfaction of adolescents.

The subjective definition that the individual or family makes of the stressor event, 'C', is the third factor in the ABC-X model. Adolescents' perception of events can be related to the overall understanding that they are able to make of their situation. Adolescents who consider their age-related transitions or their BMI status to be negative experiences may have a pessimistic view of the future and a more difficult time adjusting, making them feel upset or stressed more frequently; those who maintain an optimistic view despite negative experiences hope to adjust satisfactorily. Thus, students' perceptions of stress will act as the 'C' factor, or overall view of the situation.

The magnitude of the stress/crisis is reflected by the integration of these three factors as they influence the 'X' factor, which represents the level of organization maintained by the individual or family. Specifically in this study, all of the factors dealing with adolescents' stressors, resources and perceptions interact to influence the final 'X' factor, represented by overall life satisfaction.

Adolescence is a period of rapid change that results in various forms of biological, family, school, peer and societal stress. Stress is an attack on both an individual's biopsychological system and a family's social system. When adolescents experience life events associated with stressful transitions in personal and family roles, along with physiological and psychological health stressors, stress is increased. Adolescents who experience stress from both personal and family changes, along with weight issues, may draw upon various resources, such as their perceived health status and body image, to facilitate coping. These factors can interact with the stress in their lives to relate with satisfaction with life. Thus, adolescents who perceive their parents as being indulgent (A) along with having a higher BMI (A), may incorporate various internal resources to deal with stress such as perceived health (B) or perceived body image (B). These factors can interact with their perception of life stress (C) to relate with their level of

organization or satisfaction with life (X). On the basis of FST, the present study examined the relationships among parental indulgence, BMI and adolescents' perceptions of health, body image and stress and their association with adolescent satisfaction with life.

In addition to describing selected eating, health and activity behaviours of adolescents, this study had three primary aims. The first aim was to determine if within the context of gender, indulgent parenting and adolescent weight status are associated with adolescent perceptions of health, body image and stress and correlated with adolescent life satisfaction. Specifically, we propose that indulgent parenting would be negatively associated with health (H1a), positively associated with stress (H1b) and negatively associated with life satisfaction (H1c). The second aim was to determine the relationship between indulgent parenting and both positive and negative eating behaviours. We propose that parental indulgence would be positively associated with negative eating behaviour and negatively associated with positive eating behaviour (H2). Further, the third aim focused on the potential influence of gender on the health of adolescents and the indulgence behaviours of parents. We propose that being female will be positively related to health status and negatively related to body image (H3). Although we predict that gender is related to parental indulgence, because of a dearth of literature we make no predictions regarding the direction of this relationship or the gender differences within the specific elements involved in parental indulgence.

Method

A survey research design was used to investigate the role of two stressors, perceived parental indulgence and adolescent weight status, on adolescent life satisfaction. An electronic survey of adolescents, who were sophomores and juniors in high school, was conducted at a university-affiliated research school in the United States. This school is in a state where 32% (40% boys and 25% girls) of 10- to 17-year-old youths are overweight (Annie E. Casey Foundation, 2006; Centers for Disease Control, 2007). Because of the school's research mission, parents are aware of the potential involvement of their children or themselves as research participants. This public school, which enrolls students from kindergarten through grade 12, has approximately 1600 students from seven counties who represent the diverse population of the state.

Participants

Of the 327 sophomore and junior students contacted, 198 students completed the survey (52.6% boys and 47.4% girls), a response rate of 61%. These students were chosen because they were 15 to 16 years old—mid-range in the National Health and Nutrition Examination Survey adolescent data. The participants, whose average age was 15.8 years, were in grades 10 (61.6%) and 11 (38.4%). The sample was composed of 62.4% Whites, 23.9% Blacks, 11.7% other, 1.5% Asians and 0.5% Native Americans. Of the total sample, 10.1% indicated that their ethnicity was Hispanic. The majority of their parents were married (63.3%) with a median of two children.

Procedure

The data collection followed both Human Subjects Protocol and recommendations from school administrators. After approval from review boards at both the researchers' university and the university school, information about the study and consent forms were mailed to all parents of students in the 11th and 12th grades. In addition, the researchers explained the study to students in English classes so that they could take home information about the study to their parents and gain consent, if no consent form had been returned to the school. Students with signed consent forms were allowed to go to the computer lab with a researcher and take the electronic survey. The study was re-explained, and students who completed the electronic survey gave their assent by reading a statement on the first page of the survey and continuing with the study. A drawing was conducted that awarded a monetary reward to five students who were involved in the survey.

Data analysis included various statistical techniques. The theoretical model was tested using structural equation modelling (SEM), which was determined to be the most appropriate way to test the ABC-X model and underlying relationships among the variables. The model was analysed using AMOS 7.0 (Arbuckle, 2006; SPSS Inc., Somers, NY, USA) and incorporated recommended modifications as indicated by the analysis. Path analysis was used to further examine adolescent positive and negative eating behaviours. In keeping with customary usage, the established level of significance was used ($p \leq 0.05$).

Measures

The survey comprised demographic items and questions to gain background information to characterize the eating, health and activity behaviours of the participants. These questions involved topics such as eating dinners with families; regularity of eating breakfast; frequency of consuming foods; perceptions of their weight; involvement in weight loss or exercise programmes; and daily activities such as sleeping, watching TV and using communication technology. Students were asked about parents allowing them to eat anything they chose, the number of times they had eaten snacks the previous day, inability to stop eating at times, coping with stress by eating snacks, amount of money spent on snacks and feelings of stress from the economy. A brief description of study variables and measures related to the ABC-X model follows.

A—*Parental indulgence* was measured by a 31-item scale that indicated various kinds of indulgences given by parents (Bredehoft & Walcheski, 2008; Clarke et al.,

2004). After reverse coding five of the items, the responses ranged from 1 = never to 7 = always. The kinds of indulgence can be categorized as *giving too much* (e.g. privileges, freedom and clothes), *soft structure* (e.g. did not tell child no, make rules, or have child do chores) and *overnurturance* (e.g. involved in everything child did, made sure child was entertained and gave child a great deal of attention). In this study, the reliability of the overall scale was $\alpha = 0.87$, and the subscales had reliabilities of $\alpha = 0.90$, $\alpha = 0.71$ and $\alpha = 0.84$, respectively.

A—*Weight status* was determined by BMI *z*-scores, which were calculated from the reported weight and height of the participants while taking into account gender and age. An indirect measure of body fat, BMI *z*-scores can be used to classify adolescents as being underweight (<5th percentile), normal weight (5th percentile to <85th percentile), overweight (85th to <95th percentile) or obese (≥95th percentile).

B—*Perceived health* was determined by asking the adolescent, 'in general, how would you rate your health?', with responses ranging from 1 = poor to 5 = excellent.

B—*Body image* was determined by asking adolescents, in general, how satisfied they were with their *body image*, ranging from 1 = very unsatisfied to 5 = very satisfied.

C—*Stress* was measured using the Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983). This 13-item Likert-type scale asked adolescents how often in the last month they were upset because of something that happened unexpectedly, felt nervous and stressed, or were angered because things were outside of their control. Responses ranged from 1 = never to 5 = very often with a reliability within this study of $\alpha = 0.82$.

X—*Life satisfaction* was measured by the Satisfaction with Life Scale (Diener, Emmons, Larsen & Griffin, 1985). This five-item Likert-type scale included items pertaining to life being close to ideal, conditions of life being excellent and satisfaction with life. The range of responses was 1 = strongly disagree to 7 = strongly agree, with a reliability of $\alpha = 0.84$.

Gender—To examine the role of gender, this variable was coded as 0 = male and 1 = female.

Results

Description of eating, health and activity characteristics for adolescents

Basic characteristics regarding eating, health and activity behaviours were analyzed. Regarding eating behaviours, 80.3% reported eating dinners with their families, although 41.4% usually/often skipped breakfast. Of these adolescents, 45.8% indicated that their parents let them eat anything they wanted fairly often to always. They reported spending an average of 7.7 h a day sleeping, 2.5 h watching TV, 3.4 h using their computers, 7.3 h texting, 6.8 h using their cell phones and 2.8 h networking on social websites. The times noted for texting, cell phones and networking should be read with caution because these categories actually overlap. The ranges in BMI *z*-scores were 16.5 to 43.5 for boys and 17.8 to 34.0 for girls. When categorizing BMI as *z*-scores, 1.35% of the sample was underweight, 73% had normal weight, 14.5% were overweight and 11.3% were obese (63.9% of the boys and 82.9% of the girls had a healthy BMI).

Description of model of adolescent life satisfaction

A structural equation model based on FST was utilized because it permitted an examination of the relationships among a network of pertinent variables. Within the context of gender, this model examined the integration of the level of parental indulgence (A), adolescent weight status (A), perceived personal resources of health (B) and body image (B), along with life stress (C) to relate with adaptive outcomes—satisfaction with life (X). An examination of the correlations among the variables used in this model (Table I) indicated that the three manifest variables of *give too much*, *soft structure* and *overnurturance* were related to each other. *Gives too much*, *soft structure* and *overnurture* were all positively related to life satisfaction and negatively related

Table I. Correlation matrix of variables in stress model

Variable	1	2	3	4	5	6	7	8	9
1. Gender†		0.10	0.08	0.11	−0.13	−0.34**	−0.06	0.17	0.03
2. Give too much			0.41**	0.66**	−0.14	0.20*	0.24**	−0.40**	0.41**
3. Soft structure				0.19*	−0.08	0.09	0.20*	−0.44**	0.37**
4. Overnurture					−0.07	0.12	0.17	−0.22*	0.37**
5. Adolescent weight status						−0.17	−0.28**	0.19*	−0.12
6. Health							0.38**	−0.36**	0.15
7. Body image								−0.29**	0.32**
8. Life stress									−0.56**
9. Life satisfaction									

*$p \leq 0.05$.
**$p \leq 0.01$.
†Dummy coded (0 = males, 1 = females).

to the life stress of adolescents. The correlation matrix also indicated that there was no significant relationship between the three types of indulgence and adolescent weight status. Whereas weight status was inversely related to life stress and body image, health and body image were positively related to each other. Examination of tolerance and variance inflation factor scores yielded no evidence of multicollinearity.

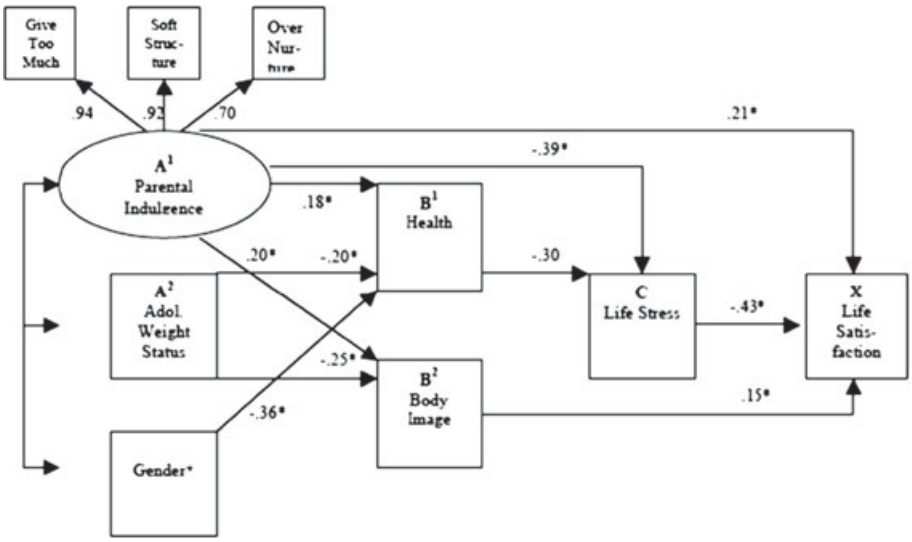
We first tested the measurement model to determine model fit. The measurement model indicated good model fit (Chi-square = 16.28 with 11 degrees of freedom, Tucker Lewis Index (TLI) = 0.932, Comparative Fit Index (CFI) = 0.979 and Root Mean Square Error of Approximation (RMSEA) = 0.06). The factor loadings were all significant, ranging from 0.556 to 0.767. Because of the acceptable fit of the measurement model, further analysis was completed to test the final structural model. In the final model, adolescent life satisfaction was directly and positively related to body image and parental indulgence and inversely related to life stress (Figure 1). Higher perceived ratings of health status were related to being male, being indulged by parents and having a lower BMI. Perceived parental indulgence (having parents give too much, be overnurturant and provide soft structure) was related to higher perceptions of health and body image, less stress and more life satisfaction. However, greater adolescent weight (i.e. BMI) had an inverse relationship with life satisfaction, when associated with health, life stress and body image. Adolescents with higher BMI scores had a lower self-perceived rating of health, which was related to higher life stress and lower life satisfaction. Higher BMI scores were also related to a lower perception of body image and life satisfaction. Direct, indirect and total effects of the variables on adolescent life satisfaction were calculated using AMOS 7.0 and are noted in Table II. Using the bootstrapping procedure within AMOS 7.0, we found that the direct effects of parental indulgence, body image and life stress were significant, along with the indirect effects of parental indulgence and health, and the total effects for parental indulgence, health, body image and life stress. An examination of these data indicated that the greatest total effects in the model resulted from parental indulgence followed by life stress. There were good indices of fit for this model with a chi-square of 19.54 ($p = 0.299$), CFI = 0.967, TLI = 0.913 and RMSEA = 0.034. The model explained 37.1% of the variance in life satisfaction of these adolescents.

Because of the prominence of parental indulgence and role of gender differences in the model, a further examination of adolescent perceptions of parental

Table II. Direct, indirect and total effects on adolescent life satisfaction

Variables	Direct effects	Indirect effects	Total effects
Gender†	0.000	−0.046	−0.046
A: parental indulgence	0.214*	0.219*	0.433*
A: adolescent weight status	0.000	−0.064	−0.064
B: health	0.000	0.129*	0.129*
B: body image	0.149*	0.000	0.149*
C: life stress	−0.429*	0.000	−0.429*

*$p \leq 0.05$.
†Dummy coded (0 = males, 1 = females).



* Control Variable (males=0; females=1)
Lines indicate significant relationships at p≤.05

Figure 1. Model of adolescent life satisfaction

indulgence was performed (Table III). The top three modes of indulgence were (1) parents giving lots of privileges, (2) parents giving lots of freedom and (3) parents believing activities should be fun. In contrast, the lowest ranking items for parental indulgence were (1) parents doing homework when difficult, (2) parents not giving chores and (3) parents not making rules. Although the majority of the types of indulgence were similar for each gender, there were some gender differences. Girls perceived that parents more frequently anticipated their needs and provided for them, did things that they should do for themselves and gave them shoes, jewellery, accessories and cosmetics. In general, girls usually got what they wanted. In comparison, boys perceived that parents more frequently allowed them to have toys and gadgets that were seldom used and did not make rules or hold them to consistent standards.

To determine the relationship between indulgence and positive and negative eating behaviours, a path analysis was incorporated (Figure 2). Direct relationships between family dinners and fast-food intake, as well as 'eat anything I want' and fruit and vegetable intake were not significant. These relationships were subsequently dropped from the final model based on modification indices and theory. The final model examined indicated a good model fit with a chi-square of 4.54 ($p = 0.603$), CFI = 1.00, TLI = 1.00 and RMSEA = 0.000. In the path analysis, fruit and vegetable intake was positively related to family dinners, which was positively related to adolescent perceptions

Table III. Examination of adolescent perceptions of parental indulgence by gender

	Male	Female	Total
Kinds of indulgences from parents	Mean (SD)	Mean (SD)	Mean (SD)
Giving too much†			
Gave numerous privileges	4.79 (1.6)	4.97 (1.6)	4.88 (1.6)
Gave lots of freedom	4.76 (1.5)	4.66 (1.6)	4.71 (1.5)
Gave clothes	3.89 (1.7)	4.27 (1.3)	4.07 (1.5)
Gave more privileges than others of a similar age received	3.78 (1.6)	3.90 (1.7)	3.84 (1.7)
Gave more than requested	3.78 (1.8)	3.87 (1.7)	3.82 (1.8)
Gave shoes, jewellery, accessories, cosmetics and others	3.45 (1.9)	4.16 (1.4)	3.79* (1.7)
Gave things not requested	3.79 (1.5)	3.77 (1.5)	3.78 (1.5)
Gave gadgets, sports equipment, electronics and others	3.65 (1.7)	3.87 (1.8)	3.76 (1.7)
I usually got what I wanted	3.15 (1.6)	3.69 (1.6)	3.41* (1.6)
Soft structure†			
Allowed to have toys and gadgets that were seldom used	4.19 (1.6)	3.66 (1.8)	3.93* (1.7)
Did not mind my having clothes, shoes and others seldom worn	3.72 (1.8)	3.78 (1.9)	3.75 (1.9)
Did things to make me love them	3.46 (1.9)	3.32 (1.9)	3.39 (1.9)
Did things for me rather than see me distressed	3.40 (1.7)	3.09 (1.5)	3.25 (1.6)
Did not tell me 'no'	3.00 (1.4)	3.24 (1.3)	3.11 (1.4)
Did things for me that I should do for myself	3.08 (1.6)	3.11 (1.6)	3.09 (1.6)
Did not enforce rules	2.71 (1.7)	2.73 (1.6)	2.72* (1.7)
Allowed me to interrupt adult conversations	2.61 (1.7)	2.73 (1.7)	2.67 (1.7)
Did not hold to consistent standards	2.65 (1.6)	2.62 (1.5)	2.63* (1.6)
Let me have lead and dominate family matters	2.48 (1.5)	2.77 (1.4)	2.62 (1.5)
Did not make rules for me	2.57 (1.6)	2.51 (1.6)	2.54* (1.6)
Did not have me do chores	2.56 (1.8)	2.30 (1.6)	2.43 (1.7)
Did my homework, when difficult	1.24 (0.8)	1.38 (0.9)	1.31 (0.9)
Overnurturing†			
Believed my activities should be fun	4.64 (1.7)	4.68 (1.6)	4.66 (1.7)
Give me a great deal of attention	4.54 (1.5)	4.61 (1.5)	4.58 (1.5)
Anticipated my needs and provided for them	4.33 (1.5)	4.78 (1.7)	4.55* (1.6)
Hated to see me frustrated	4.41 (1.7)	4.71 (1.6)	4.55 (1.6)
Involved in everything I did	4.09 (1.6)	4.03 (1.7)	4.06 (1.6)
Made sure I was entertained	3.79 (1.7)	3.69 (1.6)	3.74 (1.7)
Sought activities for my participation	3.48 (1.8)	3.33 (1.9)	3.41 (1.8)
Scheduled me for activities, lessons, sports and camps	3.42 (2.0)	3.08 (2.0)	3.25 (2.0)
Found things for me to do when I was bored	3.17 (1.8)	3.13 (1.7)	3.15 (1.7)

*Significant differences at $p \leq 0.05$.

†Individual items rank ordered by total mean for each kind of indulgence.

SD: standard deviation.

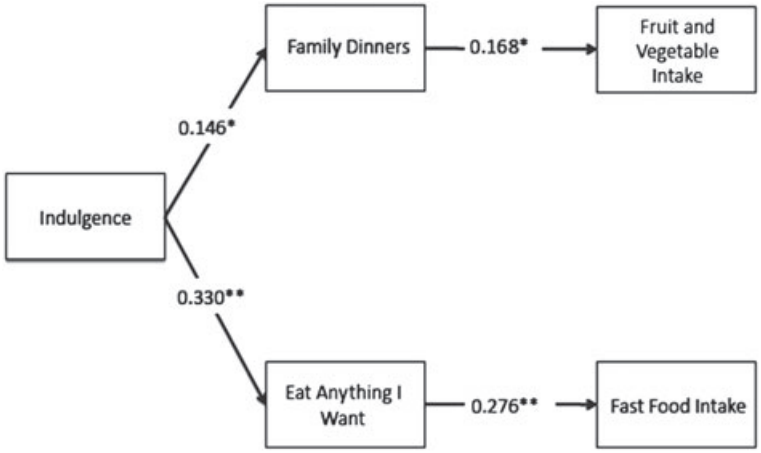


Figure 2. The paradoxical relationship between parental indulgence and eating behaviours

of indulgence. Negative eating behaviours were also related to indulgence. Fast-food intake was positively related to adolescents being able to eat anything they wanted, which was also positively related to perceptions of parental indulgence.

Summary of findings

In addition to finding out more about the eating and health behaviours of adolescents, this study had two primary aims. The first aim, to determine the role of indulgent parenting and adolescent weight status on life satisfaction through adolescent perceptions of health and body image and stress, was supported by the SEM model. Parental indulgence was not only positively related to adolescent satisfaction with life, but also to better health ratings, perceived body image and stress ratings. Adolescents with higher BMI *z*-scores had a lower self-perceived rating of health, which was related to higher life stress and lower life satisfaction. Higher BMI *z*-scores were also related to a lower perception of body image and life satisfaction. The ABC-X stress model was partially supported by this model, with parental indulgence positively related to adolescent life satisfaction and adolescent weight status negatively related to life satisfaction. Whereas parental indulgence was found to be a positive element in these students' lives, weight status was inversely related to health and body image and thereby had an indirect inverse relationship with life satisfaction.

Secondly, we wanted to determine the relationship of indulgent parenting to adolescent eating behaviours, specifically fruit and vegetable and fast-food intake. The results of this analysis indicated that indulgent parenting may have both positive and negative effects on adolescent food intake. Whereas indulgence was positively related to family dinners, which was related to higher levels of fruit and vegetable intake, indulgence was also related to allowing children to eat whatever they wanted, which was related to consuming more fast food. This study showed that although indulgence was positively related to adolescent satisfaction with life, it was also related to unhealthy eating behaviours and coping methods that could be related with adolescents' future health, stress and well-being.

Discussion and implications

One important conclusion of this study is that various paradoxes exist within families that add to their complexity. A paradox is not a contradiction, but rather it is a realization that two seemingly contradictory things can be true or co-exist and thus held in tension. In the context of a complex relational dialectic, a synthesis seemed to emerge allowing families to tolerate the inevitable ambivalence created by the stresses and strains in combination with the rewards and benefits of parenting styles, health, stress and satisfaction with life. Our findings revealed several interesting tensions and questions.

Firstly, whereas indulgence is often known to have a negative impact, what adolescent would not want to be indulged? Contrary to H1, indulgence was related to higher levels of satisfaction, body image and health perceptions along with less general stress in their lives. However, although parental indulgence may have enabled adolescents to feel more in control of their lives, experience less stress and feel more positive life satisfaction, early experiences with stress facilitate being able to handle stress later in their lives (Boss, 2002). Indulgent parents may unintentionally prevent important developmental opportunities for adolescents to develop their own strategies to make independent decisions based on personal values, manage and control complex situations on their own and respond appropriately to other authority figures who do not indulge them (Papalia, Olds & Feldman, 2009).

As is typical in the ABC-X model of stress, the stressors in this study, indulgence and BMI, both influenced the resources of adolescent body image and health, although in opposite directions. Whereas indulgence had a positive influence on adolescent body image and health perceptions, BMI inversely influenced these protective factors. In addition, both health and indulgence were inversely related to life stress in the model. Perhaps both indulgence and health perceptions act as buffers to protect against some of the stress caused by BMI. Body image had a positive relationship with life satisfaction; however, it was not related to adolescent perceptions of life stress. Indulgence (soft structure, giving too much and overnurturance) was evident and had the greatest total effect on life satisfaction. These adolescents were generally of normal weight but were also sedentary with a majority reporting that parents allowed them to eat anything they wanted. Many adolescents consumed snack foods four or more times in the previous day and almost half coped with stress by eating more foods such as chocolate, ice cream and snack foods. In other words, although the majority of adolescents have a healthy BMI at this time, what does the future hold in store for their weight, body image, stress and life satisfaction if these eating and sedentary behaviours continue? Thus, the variables in the model partially supported the ABC-X model of family stress at this time in their lives, but ongoing research is recommended for this age group in order to determine the effects of indulgence on their long-term eating and health behaviours.

On the basis of the structural equation model and further analysis of parent indulgence behaviours, there may be contradictions related to gender differences that existed for some of the main variables, such as adolescent perceptions of parent indulgence, as well as their health status. The boys in this study had higher perceptions of their own health status than did the girls. This is consistent with previous research, showing that female status is often found to be associated with lower self-rated health (Benyamini et al., 2000; Piko, 2007). Girls also were more likely to believe that their parents anticipated their needs, did things for them that they should be doing for themselves and gave them shoes, jewellery, accessories and cosmetics. Boys, however, perceived their parents as providing them toys and gadgets, limited rules and inconsistent standards. Although both types of indulgence seem to reduce adolescents' stress levels, neither pattern is optimal if it perpetuates stereotypes and promotes high self-interest over moral and social development.

A second tension brought out by this study is that although indulgence was positively related to adolescent satisfaction with life, it was directly related to both positive and negative eating behaviours as was hypothesized (H2). It makes sense that parents who give their children a disproportionate amount of time and resources would spend more time having dinner together as a family. Family dinners have been associated with improved school and psychological performance, as well as more healthy eating patterns including an increased consumption of fruits and vegetables (Anderson, Wilson & Fielding, 1988; Gillman et al., 2000). This is consistent with the current study, which demonstrated a positive association between family dinners and fruit and vegetable intake. In families where parents give their children whatever they want, it is not surprising that children translate that mentality to their food intake. Adolescents with parents who indulged them felt that they could eat whatever they wanted. In addition, eating whatever they wanted was associated with higher levels of fast-food intake. A high level of fast-food intake has been associated with homes that contain more soda and salty snack foods, as well as less fruits and vegetables (Boutelle, Fulkerson, Neumark-Sztainer, Story & French, 2005). Fast food has been directly associated with changes in body weight as well as insulin resistance in all ethnic groups (Pereira et al., 2005). Ironically, indulged and satisfied adolescents seem to be practicing unhealthy habits that, in turn, could lead to poor physical health, overweight and poor body image—factors associated with low life satisfaction.

The strengths of this study included an understudied age range of students and research questions regarding two parallel issues in the lives of adolescents—parental indulgence and eating behaviours/weight as they are related to stress and satisfaction with life. The discovery that parental indulgence was associated with several positive relationships is contrary to what might be expected in light of a parenting style typically considered less than optimal. Therefore, the notion of paradox, allowing for contradictions, is important for deepening and extending our understanding of complicated issues. Thus, future studies could further probe paradoxes related to health, well-being, stress and life satisfaction issues.

Some limitations existed for this study, in that no causation could be inferred because of its cross-sectional design. Future research would benefit from longitudinal examinations to measure changes in adolescents when going through different developmental issues and stresses. Moreover, adolescents, especially if female and overweight, tend to underestimate body weight on self-reports (Banitt et al., 2008; Sherry, Jefferds & Grummer-Strawn, 2007). Whereas recent data indicate that 17% of US adolescents and 32% of adolescents in this state between the ages of 10 to 17 years are overweight, this study had 26% of 15- to 16-year-old adolescents who were overweight to obese. Although these data are similar, differences could be attributed to under-reporting or the more narrow age range of participants in this study. Child and parental perceptions of indulgence may also differ. Therefore, future studies should compare parent and child perceptions of indulgence, health and satisfaction with life

issues, as well as the long-term relationships of parental indulgence with child/adolescent health and satisfaction with life. Lastly, this study is based on self-report, and it is unknown to what extent adolescent perception of indulgence corresponds with actual parental indulgence.

This research has many implications for family life education and health education for both parents and adolescents. Teaching parents about the long-term implications of parental indulgence on health issues and short-term signs of unhealthy habits may be important for reducing the risk of obesity and other health and stress issues later in life. Although we did not find an immediate negative relationship between indulgence, BMI and stress, many negative behaviours were linked to indulgent parenting, including low cognitive restraint when eating and using food as a mechanism to cope. Parents could benefit from learning ways they can support their adolescents in developing cognitive restraint and positive skills through planning, good decision-making and healthy habits. Parents could also gain tips for incorporating positive discussions and activities related to issues of body image, stress, health, weight control and life satisfaction when they spend time with their adolescents. Parents who learn to evaluate their own parenting styles and change their indulgent behaviours can guide their adolescents develop self-determining rather than self-indulgent health behaviours, perhaps simultaneously facilitating life satisfaction as adults.

Of course, 15- and 16-year-old youths gain increasing freedom as they learn to drive, get jobs and eat outside of home and school with friends. Therefore, health and lifestyle education for adolescents is essential and can help them attain developmental milestones such as building personal and social identity. Formal high school classes, such as health and family and consumer sciences education, often include health-related topics and can fill in gaps left by indulgent parents. This study points to the importance of including in-depth units on nutrition and its short-term and long-term effects, building healthy eating habits, preparing healthy snacks, identifying techniques to manage stress (including the relationship with physical exercise), purchasing healthy foods outside the home and gaining an appropriate body image and BMI. This study also underscores the need to teach critical thinking skills about issues such as the media's impact on body image and proactive ways to develop beneficial lifestyles.

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