

Subjective Well-Being in Adolescence: The Role of Self-Control, Social Support, Age, Gender, and Familial Crisis

Tammie Ronen · Liat Hamama · Michael Rosenbaum ·
Ayla Mishely-Yarlap

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Abstract Focusing on adolescents' subjective well-being, the present study comprised three parts. The first examined the role of two coping mechanisms, self-control and social support, in predicting subjective well-being. The second related to the role of age and gender in predicting adolescents' subjective well-being. The third raised the question of whether exposure to familial crisis would predict adolescents' subjective well-being and whether self-control and social support would moderate the link between crisis and adolescents' subjective well-being. Participants included 380 adolescents ages 13–17 years ($M = 15.32$, $SD = .98$; 194 boys, 176 girls, 10 unspecified), from six integrative junior-high and high schools in central Israel. All schools served a heterogeneous Jewish student population. Based on responses to a questionnaire identifying adolescents who reported experiencing a severe life crisis during the last year (e.g., severe illness in family, parent death or separation/divorce), the sample was divided into two groups: exposure to familial crisis ($n = 96$) and no exposure to familial crisis ($n = 284$). Outcomes revealed that both self-control and social support predicted adolescents' subjective well-being. As expected, older adolescents presented lower levels of subjective well-being than younger ones. In contrast to the hypothesis, gender did not predict subjective well-being. Although exposure to crisis did not predict higher negative affect or lower positive affect, an interaction emerged between self-control and crisis in predicting positive affect. Thus, among adolescents who experienced crisis, better self-control skills predicted higher levels of positive affect.

Keywords Adolescents · Satisfaction from life · Positive and negative affect · Self-control · Social support · Life crisis

1 Introduction

The adolescent period is characterized by rapid individual personality changes due to physical growth and psychological, social, and cognitive development, which necessitate

T. Ronen · L. Hamama (✉) · M. Rosenbaum · A. Mishely-Yarlap
Tel Aviv University, Tel Aviv, Israel
e-mail: hamama@post.tau.ac.il

coping with fluctuations in appearance, thinking style, and behavior (Erikson 1950; Steinberg 2007; Steinberg and Morris 2001). Moreover, a wide range of cultural and environmental transformations occur as a result of adolescents' increased family responsibilities, rising academic and social demands, separation and individuation from the family unit, and exploration of stressful new experiences with peers and novel adult activities (Davies 1999; Helsen et al. 2000; Steinberg 2005, 2007; Vasta et al. 1995). Taken together, these developments reinforce the emerging understanding of adolescence as a critical or sensitive period for reorganization of regulatory systems, a reorganization that is fraught with both opportunities and risks (Steinberg 2005, 2007). This raises the question of whether adolescents, during this rapidly changing developmental period, can maintain a high level of subjective well-being.

Subjective well-being encompasses a major life goal and an important tool for optimal flourishing and functioning (Carr 2004; Fredrickson 2009; Gable and Haidt 2005). Subjective well-being is defined here as consisting of high positive affect (positive moods), low negative affect (negative moods), and high satisfaction from life (Headey and Wearing 1991). Busseri et al. (2012) showed that these components are linked to positive psychological, physical, and interpersonal functioning. Yet most studies on subjective well-being have examined adults, whereas research on adolescents' subjective well-being is only in its infancy (Keyes 2006; Ronen and Seeman 2007).

Most studies addressing adults' subjective well-being attempted to identify components that may be associated with distress such as self-efficacy, self-control, and social support (Folkman 1997, 2008; Fredrickson 2009; Lazarus and Folkman 1984). Those studies tested coping mechanisms that may be associated with reduction of distress. Only a few studies attempted to identify resources and coping mechanisms that may potentially contribute to the promotion of subjective well-being, for example, optimism, hope, and time perspective (Boyd and Zimbardo 2005). The main aims of the current study, therefore, were to extend prior research to the adolescent period and to examine two internal and external mechanisms that may be associated not with adolescents' reduced problems or distress but rather with their maintenance of subjective well-being, both during normative adolescence and at times of family crisis.

During normative adolescence, there is a need to cope with rapid physical changes, dramatic psychological changes, and transitions in social and cultural contexts (Gelhaar et al. 2007). It is therefore important for adolescents in general to attain high levels of subjective well-being (Balk et al. 2011; Coleman and Hagell 2007) to promote their learning, adjustment to society, and life quality (Fredrickson 2009). Achieving subjective well-being is of even greater importance when adolescents additionally experience a major life crisis, possibly serving a unique role in helping youngsters cope with the crisis, become resilient, and improve their functioning so that these stressful negative experiences will not impair their adjustment (Dahl 2001; Fredrickson et al. 2003). Such adolescents may be able to bounce back from negative experiences and adapt more easily to ever-changing demands (Reschly et al. 2008).

The ultimate goals of developing positive functioning (Keyes 2006) and feeling happy (Fredrickson 2003) can be achieved by tapping resources and skills (Rosenbaum 1998a, b). Two main resources or coping mechanisms have been linked with the ability to conduct happy, healthy lives (Lazarus and Folkman 1984): personal skills of self-control (Kennett and Keefer 2007; Rosenbaum 1980, 1998b) and environmental resources of social support (Cohen and Wills 1985). Thus, the first part of the current study specifically investigated the role of individual coping mechanisms (self-control skills) and of environmental coping mechanisms (social supports) as associated with the subjective well-being of adolescents in

general. We also expected self-control and social support to enable adolescents to maintain subjective well-being at times of crisis (e.g., coping mechanisms will moderate the link between crisis and subjective well-being). The moderating role of adolescents' self-control and social support has previously been studied regarding anxiety (Ronen and Seeman 2007), aggression (Ronen and Rosenbaum 2010), and mental health symptoms (Agbaria et al. 2012). In the present study, we focused on the role of self-control and social support in moderating the link between crisis and subjective well-being.

The second part of the current study focused on the possible role of developmental variables—age and gender—in predicting adolescents' ability for subjective well-being. As children mature and grow into adolescents, they are exposed to the growing demands of family and society. They are also more sensitive to the effects of emotional stress and crisis (Dahl 2001, 2004). We therefore expected that older adolescents would experience higher pressures and stress compared to younger adolescents; namely, we expected that adolescents would present lower levels of subjective well-being with increasing age.

As for gender differences, most of the studies on adolescent coping did not find differences between the sexes regarding actual response to traumatic events, or the kinds of coping mechanisms adolescents used (Coleman and Hagell 2007). However, differences were found in how adolescents assess events or express emotions regarding the events. Gelhaar et al. (2007) as well as Reschly et al. (2008) and Tamres et al. (2002) found that females tend to assess events as more severe than males do and that when coping with stress females tend to focus more on emotional responses and social support, whereas males tend to ignore emotional stress. Inasmuch as the present study focuses on subjective well-being and not on functional behavior following the traumatic event, we expect females, who are more sensitive to emotions than males, to express lower levels of subjective well-being.

In addition to the potentially stressful natural changes and growth to which adolescents are exposed, they also might experience a familial crisis. Research on stress and coping in adolescence has focused on the impact of major life events on adolescents (Gelhaar et al. 2007), or on adolescents' individual responses to such events. Adolescents' responses to family crisis may differ, due to the kinds of coping mechanisms adolescents activate (Coleman and Hagell 2007; Gelhaar et al. 2007). In line with Coleman and Hagell (2007), we assume that coping mechanisms can change the probability that adolescents will present low levels of subjective well-being following crisis. To the best of our knowledge, researchers have not yet examined these links for adolescents while concurrently integrating crisis, subjective well-being, and the two coping mechanisms of self-control and social support. Thus, the third part of our study focused on whether adolescents who experience familial crisis develop different levels of subjective well-being than those who are not exposed to familial crisis. Moreover, as mentioned, we investigated whether self-control and social support would moderate the link between crisis and the subjective well-being of adolescents.

1.1 Subjective Well-Being

Diener et al. (2013) defined subjective well-being as “the level of well-being experienced by people according to their own subjective evaluations of their lives... These evaluations include cognitive judgments about satisfaction from life, and affective reactions to life” (p. 153). Thus, subjective well-being combines satisfaction from life, positive affect, and negative affect (Headey and Wearing 1991; Huebner 1991; Schimmack 2008). These three

components relate to experiencing life-as-a-whole and measure the subjective quality of life regarding one's objective standard of living (Huebner 1991; Schwarz and Strack 1991).

Satisfaction from life is a process of subjective evaluation comparing one's expectations and goals with one's capability of progressing toward achieving those goals (Diener 2008; Diener et al. 1985; Myers and Diener 1995). It provides a global means for cognitively relating to one's own quality of life (Diener and Suh 2000; Diener et al. 2009, 2013; Huebner et al. 2000) as related to one's self-efficacy in the context of such comparisons between expectations and achievements (Bandura 1997). Bandura (2006) emphasized that in order to be satisfied with life one should look not at the environment as shaping one's life but rather at how one can be active in achieving goals and thus shape one's own life. Thus, satisfaction from life depends on the size of the perceived gap between an objective situation and standards set by the individual (Kahneman 1999).

Positive and negative affect are the emotional components of subjective well-being and relate to daily life experiences (e.g., excitement, happiness, despondency) by comparing good feelings with bad ones (Myers and Diener 1995). Positive affect and negative affect are often studied as part of a positive–negative scale (Watson et al. 1988). Positive emotions broaden momentary thought-action repertoires, resulting in a higher likelihood of pursuing a wider range of thoughts and actions, because one can see more possibilities (Fredrickson 2009). Positive affect correlates with satisfaction from life (Shmotkin and Lomranz 1998) as well as with high levels of self-confidence and a richer social life (Bood et al. 2004). Negative affect includes sorrow, fear, worry, anger, disgust, hate, and guilt, and correlates with reports of stress symptoms (Bood et al. 2004; Seligman et al. 2005). It narrows momentary thought-action repertoires and causes humans to see fewer opportunities (Fredrickson 2009; Magyar-Moe 2009).

The nature of the association between positive affect and negative affect is not yet sufficiently clear because contradictory research outcomes have emerged (Busseri et al. 2012; Folkman 2008; Watson et al. 1999; Zautra et al. 2005). Some researchers have suggested that positive affect and negative affect may not be located on two ends of a single spectrum but rather may be distinct from one another, deriving from different physiological mechanisms (Busseri et al. 2012; Folkman 2008; Fredrickson et al. 2003). The view of positive affect and negative affect as resulting from different mechanisms implies that one can feel both at the same time and that increasing positive affect may promote happiness but may not help in decreasing negative affect (Fredrickson 2009). However, when distress levels increase, the link between the two may also increase and the existence of one may result in the reduction of the other.

1.2 Coping Resources' Links to Subjective Well-Being

In a recent book on stress, coping, and relationships in adolescence, Seiffge-Kenke (2013) highlighted the importance of coping as an effort to master environmental and internal conflicts. Studies around the world point to the fact that although modern life differs from traditional society, adolescents' needs for support have not changed. Internal coping mechanisms of the individual as well as social supports remain crucial coping mechanisms for helping children and adolescents cope.

In light of the above review, the most important question for researchers may be what internal and external mechanisms can help adolescents maintain or increase their subjective well-being. Researchers have pinpointed the role of resourcefulness or protective mechanisms in coping. Lazarus and Folkman defined coping (1984, p. 141) as "...constantly changing cognitive and behavioral efforts to manage specific external and/or

internal demands that are appraised as taxing or exceeding the resources of the person.” They suggested that coping mechanisms are components, either personal or environmental, which can assist human beings in achieving higher levels of functioning.

Regarding cultural differences in coping, research in cultural psychology shows that different cultures uphold different models of the self and its relationship with others (Adams 2005). However, most gaps between coping styles emerge while comparing cultural extremes such as comparing Asian collectivistic culture to Western individualistic culture, or traditional cultures to modern ones (Taylor et al. 2007). Between Western modern societies, such differences are harder to identify. Seiffge-Krenke and Shulman (1990) found more similarities than differences in the coping behavior of adolescents from Germany and Israel, and Seiffge-Krenke (1992) did not find significant differences between German, Israeli, and Finnish adolescents. However, most of those studies focused on coping style and not on emotional expression, which may differ across countries. In light of the prior indications that the Jewish population of central Israel resembles other Western modern societies, we assumed that the same two coping resources found to be important in other Western cultures would serve as coping mechanisms in Israel as well: self-control skills as a personal coping resource and social support as an environmental coping resource.

1.2.1 Self-control as a Personal Coping Resource

Self-control comprises a set of goal-directed skills that enable humans to act upon their aims; overcome difficulties relating to thoughts, emotions, and behaviors; delay gratification; and cope with distress, pain, and disturbing emotions while targeting both internal as well as external disturbing situations (Rosenbaum 1998a, b, 2000). The human desire to control is powerful, and the feeling of control is rewarding (Gilbert 2005). Self-control skills may therefore be viewed as a coping mechanism or skill or as a protective factor in coping with life’s demands (Kennett and Keefer 2007).

Children start acquiring self-control skills from birth. The higher skills they gain, the better they function. Previous studies suggested that the existence of high levels of self-control skills enables adolescents to overcome problems such as aggression (Ronen and Rosenbaum 2010), to cope with parents’ divorce (Hamama and Ronen-Shenhav 2012), or to cope with fear and anxiety resulting from war and terror attacks (Ronen and Seeman 2007; Rosenbaum and Ronen 1997). Fewer studies were conducted to link self-control skills with positive functioning. Recently, some research lent support to the association between self-control and the ability to attain high levels of subjective well-being (Gilbert 2005; Ronen et al. 2013; Rosenbaum and Ronen 2013), although the directionality of this link remains unclear. Some researchers view self-control as resulting from positive emotions because the latter create a good foundation for applying skills to achieve goals (Baumeister et al. 1998; Tice et al. 2007); however, other studies such as the present one view self-control as a coping resource that can improve functioning among adolescents (Hamama and Ronen-Shenhav 2012; Ronen and Seeman 2007). In a recent study conducted with adults (teachers of special education), we found that self-control predicted teachers’ increased positive affect but not decreased negative affect (Hamama et al. 2013).

Gilbert (2005) emphasized the need to bring back control to human beings as a crucial component in increasing happiness. We therefore focus on self-control skills as a crucial component in coping with crisis and in maintaining high levels of subjective well-being, assuming that adolescents who possess a higher level of self-control skills will achieve higher levels of subjective well-being.

1.2.2 Social Support as an Environmental Coping Resource

The interpersonal resource of social support offers a general positive context that enables individuals to cope better with stressful life events (Dumont and Provost 1999). Studies pinpointed social support as the main prerequisite for the ability to flourish (Folkman 1997, 2008; Fredrickson et al. 2003; Keyes 2005, 2006, 2013). Social support encompasses personal, social, and familial relationships (Sarason et al. 1990). In the course of adolescence, relations with peers become a more central source of social support, and perceived support from parents either remains constant or decreases (Helsen et al. 2000). Research has identified four kinds of social support: informative, instrumental, emotional, and companionship (Cohen and Wills 1985; House 1981). During recent decades, social support was identified as one of the most crucial factors helping human beings cope and overcome difficulties (Vohs and Finkel 2011). Good support enables a healthy lifestyle (Vohs and Finkel 2011). In relation to adolescence, social support was associated with reduction of aggressive behavior (Ronen and Rosenbaum 2010), and it was also identified as a crucial resource for helping adolescents cope with fear of war (Ronen and Seeman 2007).

Regarding demographic links to social support, the literature is lacking with respect to age differences in the role of social support during adolescence. It seems maturing adolescents depend increasingly on peer support and less on parental support (Gelhaar et al. 2007), but this area still needs further study. The positive impact of social support on adolescents' health was found to be independent of gender differences (Geckova et al. 2003). Females tend to have more social contacts, but it remains unclear as to whether they actually obtain more support than males (Reschly et al. 2008).

1.3 Age and Gender Differences in Adolescents' Subjective Well-Being

Although developmental psychologists pinpoint the fact that both age and gender are essential components to be considered in examining adolescents' well-being, the exact way in which these demographic factors affect adolescents is not yet sufficiently clear (Casey et al. 2011; Gogtay and Thompson 2010; Steinberg 2013). Gelhaar et al. (2007) found that older children may be more affected by exposure to emotional events than younger children. Keyes (2006) studied subjective well-being of 1,234 American youth ages 12–18. He found that only small percentages of adolescents are flourishing and the majority present only moderate mental health. His outcomes revealed that the level of mental health declined between the ages of 12–18. The same tendency of reduction in the rate of positive affect between 7–8 to 9 and 10th grade, was shown by Reschly et al. (2008). Based on the above, we expect lower levels of subjective well-being among older adolescents as they become exposed to more social, personal, and familial demands. In the present study, we hypothesized that older adolescents would demonstrate lower levels of subjective well-being than younger adolescents over a 5-year age span in middle adolescence, ages 13–17 years.

In addition to the role of age in adolescence, studies have also pinpointed the role of gender in determining how males and females may respond differently to developmental changes with regard to behavior, emotional expression, and symptomatology (Weisz and Kazdin 2010). Ge et al. (1994) identified differences between males and females in the pubertal transition period, including psychosocial factors, social interactions, and familial relationships, which may all be associated with how males and females express emotion and cope with stress. Researchers reported that adolescent females express stronger

emotions than males, referring to females' higher ability to express more complex emotions, to express a larger range of emotions (both positive and negative), and to talk more about fears and anxieties (Reschly et al. 2008; Ronen et al. 2003; Ronen and Rosenbaum 2010; Rosenbaum and Ronen 1997). Seiffge-Krenke (1992, 1995, 2013) and Gelhaar et al. (2007) found that females experience the same stressors as up to four times more stressful and challenging than males, and females demonstrate more withdrawal (Copeland and Hess 1995; Frydenberg and Lewis 2000).

Considering females to be more sensitive to emotion and to better express positive as well as negative emotion than males, in the second part of the current study, we expected females to demonstrate more sensitivity to the stress of the adolescent period and to show higher levels of both negative and positive emotions. That is, we expected higher levels of positive affect among females, but also higher levels of negative affect, compared to males.

1.4 Familial Crisis as a Predictor of Decreased Subjective Well-Being

The third part of the study investigated differences in subjective well-being between adolescents in general and adolescents who experienced crisis in the family. The literature suggests that life events are a major source of positive and negative stress for adolescents, and the experience of stress is associated with adolescents' health and adjustment (Dumont and Provost 1999). Morgan and Roberts (2010) claimed that during the period of adolescence youngsters usually feel a need to show that they can be independent and can cope without the help of others. Thus, they may tend to avoid expressing emotion. In case of crisis, stress, or loss in the family, they might pretend that they can deal with the situation, while actually they need substantial support and assistance in order to maintain their routine.

Although adolescents may be expected to express negative affect at times of crisis, knowledge remains insufficient on how crisis relates to subjective well-being. While assessing major life events and how they may associate with people's functioning, the most common crises studied within the family relate to sickness, death, divorce, and separation (Cohen et al. 1983; Worden and Silverman 1996). The current study examined the effects of three major types of familial life crisis on adolescents' subjective well-being: death of a parent, divorce/separation of parents, or severe life-threatening illness/accident. We excluded aggression in the family, believing this may be linked to different issues for adolescents. Worden and Silverman (1996) related to the role of parents in helping adolescents grow and develop, focusing specifically on how illness, loss, or crisis can affect adolescents' ability to develop identity. Negative emotions are not easy for adolescents to handle, and coping with the complex negative emotions of grief and stress may be even more difficult. Exposure to such emotions requires adolescents to establish a new meaning for the crisis, and to learn how to change the way they live with it (Doka 2000). Inasmuch as adolescents do not often talk about or express emotion, youngsters facing such a family crisis may develop risk behaviors such as dangerous driving, aggression, alcohol, and drug abuse (Webb 2005).

Whether a life event is considered normative or non-normative depends on its probability of occurrence, sequence of occurrence, and the degree to which it is an anticipated event at a specific point in life (Balk et al. 2011). Developmental researchers have provided much evidence that adolescence is a period of age-related stress and generally adaptive coping; however, some severe, unexpected life events can thrust adolescents into fractured versions of their former lives.

With respect to the possible effects of family crisis on adolescents' ability to maintain subjective well-being, contradictory research outcomes have emerged regarding the extent to which the stress and pain that are associated with negative affect—such as those experienced following crises—may also be associated with decreased positive affect (Watson and Clark 1994; Zautra et al. 2005). It was suggested that well-being is a uni-dimensional, bipolar construct, and therefore individuals who report high levels of negative feelings should report low levels of positive feelings (Zautra et al. 2005). However, in a national survey, Bradburn (1969) found that at times of low stress, positive affect did not correlate with negative affect. Likewise, Zautra et al. (2005) revealed that whereas positive events are associated with positive affect, stressful events are associated with increased negative affect and decreased positive affect. They offered a model suggesting that positive and negative affect were less differentiated on stressful days and more differentiated on days characterized by many positive events. These findings suggest a degree of fluidity in the breadth and depth of affective experiences, as well as different mechanisms underlying positive and negative emotions, implying that people can feel both types of affects at the same time. However, as distress escalates, such as following crisis, perhaps the negative correlation between the two affect types may also increase in strength; thus, the intensification of one affect may result in the reduction of the other.

Folkman (2008) stated that in the past, the theory of stress and coping focused mainly on appraisals and coping styles but very little on the role of positive affect at times of crisis or stress (Folkman 1997). She suggested that the revised stress and coping model must incorporate the role of positive emotions into the stress process, determining how positive affect is related to psychosocial and psychophysiological sources (Folkman 2008).

In the current study, we hypothesized that crisis would predict lower subjective well-being among adolescents. Hamama and Ronen-Shenhav's (2012) outcomes revealed that adolescents of divorced parents are not likely to become aggressive or to develop distress as long as they have both self-control and social support. In line with Hamama and Ronen-Shenhav (2012), and in line with the outcomes of Cohen et al. (2006), showing the ability of adolescents to experience positive affect in spite of the trauma and grief they experienced, we examined these two resources as possible moderators of the link between familial crisis and subjective well-being.

2 The Current Study

The first major aim of this study was to explore the role of the personal resource of self-control skills and the environmental resource of social support in maintaining adolescents' subjective well-being (satisfaction from life and positive and negative affect). The second aim was to learn how developmental components of age and gender would predict adolescents' maintenance of subjective well-being. Third, we were interested in learning whether exposure to familial crisis would be associated with adolescents' ability to maintain subjective well-being and whether self-control and social support would moderate the link between family crisis and adolescents' subjective well-being. We posed five hypotheses:

1. Personal and environmental coping resources will predict levels of subjective well-being: Adolescents with higher levels of self-control skills and higher levels of social support will report higher levels of subjective well-being (higher satisfaction from life,

- higher positive affect, and lower negative affect) than adolescents with lower levels of self-control skills, and lower levels of social support, respectively.
2. Age will predict the level of subjective well-being: Older adolescents will report lower levels of subjective well-being (lower satisfaction from life, lower positive affect, and higher negative affect) than younger adolescents.
 3. Gender will predict the level of subjective well-being: Females will report lower levels of subjective well-being (lower satisfaction from life, lower positive affect, and higher negative affect) than males.
 4. Adolescents who experienced familial crisis will reveal lower levels of subjective well-being (lower satisfaction from life, lower positive affect, and higher negative affect) than adolescents who did not experience crisis.
 5. Self-control and social support will moderate the link between crisis and subjective well-being of adolescents. Thus, crisis will not be linked with lower subjective well-being among adolescents who reveal high levels of self-control skills and high levels of social support.

3 Method

3.1 Sample

Participants were 380 adolescents ages 13–17 years ($M = 15.32$, $SD = .98$; 194 boys and 176 girls; 10 did not specify gender). Students attended Grades 8 through 12 at six integrative schools (grades 6–12) serving a heterogeneous Jewish population in central Israel. This population was not directly exposed to security-related stress (e.g., war- or terrorism-related) and was characterized by a modern Western lifestyle resembling urban populations in the US or Western Europe. Based on the self-reported crisis questionnaire, the sample was divided into two groups: 96 students who reported experiencing at least one major crisis in the past year (e.g., parental divorce, close family member's death), and 284 students who did not report experiencing such crisis.

3.2 Instruments

All participants completed five self-report measures.

3.2.1 Sociodemographic and Crisis Questionnaire

This self-report included questions relating to age, gender, class, school, birth order, country of origin. Based on Cohen et al. (1983) and Worden and Silverman (1996), we added details regarding the experience of a major crisis during the past year. Crisis was defined as: parents' divorce or separation, death in the close family, their own or an immediate family member's severe accident or illness.

3.2.2 Satisfaction from Life Scale

This scale was developed by Huebner (1991) and translated to Hebrew by several researchers. The present version was translated by Seeman for her master's thesis (Ronen and Seeman 2007). Respondents rated 7 items relating to general satisfaction from life

(e.g., “I have a good life”; “My life is just as it should be”) along a 4-point scale ranging from *Never true for me* (1) to *Almost always true for me* (4). For the original scale, Cronbach alpha was .82, test–retest reliability was .74, and construct validity was .05. In the Hebrew version, Cronbach alpha was .83 in Ronen and Seeman (2007) and .86 in the present study.

3.2.3 Positive and Negative Affect Schedule

The original scale developed for adults by Watson et al. (1988) was adapted to children by Laurent et al. (1999) and translated to Hebrew by several researchers. The present version was translated by Seeman (Ronen and Seeman 2007) for her master’s thesis. The schedule contained two subscales consisting of words that describe feelings. The positive subscale consisted of 15 items such as “energetic” “calm,” “strong,” “active,” and “fearless.” The negative subscale consisted of 15 items describing distress, anger, and fear, such as “sad,” “frightened,” “guilty,” “stressed,” “lonely,” and “depressed.” Respondents rated the extent to which they experienced the specific feeling during the last 2 weeks, along a 5-point scale ranging from *Very little* (1) to *Very much* (5). The subscales’ reliabilities in various studies ranged from .83 to .90 for positive affect and from .85 to .90 for negative affect. The original correlation between positive and negative affect ranged from $-.05$ to $-.35$. Test–retest reliability (for Times 1 and 2 in the original study) was .88 ($p < .01$) for both the positive affect and negative affect subscales. Both subscales demonstrated good convergent and discriminant validity with existing self-report measures of childhood anxiety and depression (Laurent et al. 1999). For the Hebrew translation, Cronbach alphas were .83 for the positive affect subscale and .89 for the negative affect subscale in Ronen and Seeman (2007) and .84 for positive affect and .85 for negative affect in the present study.

3.2.4 Adolescent Self-Control Scale (ASCS)

Rosenbaum and Ronen (1991) developed this adaptation based on Rosenbaum’s (1980) scale for adults. This 32-item scale tapped adolescents’ self-reported usage of self-control skills in daily life. The scale related to one’s ability to delay gratification; overcome temptation, pain, and disturbing emotions; and use self-reinforcement, self-instruction, and planning. Statements were drawn from various domains of adolescent life: school, discipline, games, home, and friends (e.g., “When I have a headache I find it difficult to continue studying;” “When I watch a scary movie on television, I keep thinking of it and cannot overcome my fear;” or “When I find it difficult to concentrate I tell myself: ‘You have to try harder’”). This Likert-type scale ranged from *Not characteristic of me at all* (1) to *Very characteristic of me* (6), with scores ranging from -3 to $+3$. Total scores ranged from -96 to $+96$, where higher scores indicated higher self-control. The ASCS’s reliability (Cronbach α) was .85 in Rosenbaum (1980), .81 in Ronen and Rosenbaum (2010), and .76 in the present study. The ASCS revealed good validity in terms of correlations with a large range of other scales (see the detailed report in Rosenbaum 1980). Test–retest reliability in Ronen and Rosenbaum (2010) was .46 ($p < .01$).

3.2.5 Social Support Scale

This 40-item scale was developed by Cohen and Wills (1985) and translated to Hebrew by several researchers. The present version, translated by Seeman (Ronen and Seeman 2007),

measured respondents' self-reported availability of potential social resources. Respondents rated items describing different functions of social support (e.g., "When I feel lonely, there are at least a few children I can talk with;" "When I am sick and need something, I will have trouble finding someone who can help me"). The original scale furnished a general support rating ($\alpha = .88$) and four subscales: appraisal support—ability to consult and share with others ($\alpha = .82$); sense of belonging ($\alpha = .78$); esteem support ($\alpha = .73$); and tangible support ($\alpha = .81$). The original study (Cohen and Willis 1985) reported the overall scale to have adequate internal consistency and test–retest reliability. Because of the high intercorrelations between the subscales in this study, the general score was used in analysis.

3.3 Procedure

Recruitment strategies and consent procedures included several stages. First, permission was obtained from the Israeli Ministry of Education to conduct the study, as well as from the ethical committee of Tel-Aviv University. From the list of all schools in Israel given us by the Ministry, we selected six integrative schools as representative of the central Israeli heterogeneous urban student population. We contacted the six school administrators to obtain their consent. Third, parents received a letter telling them the aims of the study and asking their permission for their children to complete the questionnaire set. Parents were provided 2 weeks to respond in writing or by telephone. Few parents called to ask details about the study, and only one declined to allow her daughter to complete the questionnaires.

Following these consent procedures, several research assistants who were graduate students of social work visited each of the schools and administered the questionnaires during class time. All the participants were asked to complete the written questionnaires. The assistant only answered administrative questions (e.g., Where should I put the circle?) and otherwise referred participants to the instructions, which were written in clear, simple language at the beginning of the questionnaires. Adolescents were told that this study aimed to learn about adolescents' lives—their possible crises and subjective well-being. They were asked for their agreement to take part in the study and were told that participation was strictly voluntary; they could decide to stop at any time. Questionnaires were anonymous. Completion time took about 40 min. Only 8 new immigrants did not complete the questionnaires due to language difficulties.

4 Results

The first hypothesis related to the two coping resources as predictors of adolescents' subjective well-being. As seen in Table 1, as expected, the personal coping mechanism of self-control revealed low but significant positive correlations with satisfaction from life ($r = .32, p < .001$) and with positive affect ($r = .30, p < .001$) and revealed a low but significant negative correlation with negative affect ($r = -.21, p < .001$). The environmental coping mechanism of social support also revealed, as expected, significant positive correlations with satisfaction from life ($r = .42, p < .001$) and with positive affect ($r = .44, p < .001$) and a significant negative correlation with negative affect ($r = -.39, p < .001$). As can be seen, all those correlations were significant.

Table 2 presents a set of three hierarchical regressions, one for each of the components of subjective well-being. As seen on Table 2, age and gender were entered as control

Table 1 Means, standard deviations, and intercorrelations among study variables (N = 112–118)

Variable	Gender ^a	Age	Crisis	Self-control	Socialsupport	Life satisfaction	Positive affect	Negative affect
	1	2	3	4	5	6	7	8
1	–							
2	–.05	–						
3	–.10*	–.09	–					
4	.72	–.07	–.10*	–				
5	–.08	–.11*	–.10*	.28***	–			
6	–.03	–.25***	–.17**	.32***	.42***	–		
7	.06	–.30***	–.08	.30***	.44***	.56***	–	
8	.01	.20***	.01	–.21***	–.39***	–.47***	–.39***	–
M		15.32	.25	10.09	69.87	18.94	49.54	38.14
SD		.98	.43	19.65	6.61	5.02	9.46	1

^a Male = 1; Female = 2* $p < .05$; ** $p < .01$; *** $p < .001$ **Table 2** Stepwise regression analyses for life satisfaction, positive affect, and negative affect, with gender and age as control variables, and with crisis, self-control, and social support as predictors

	Life satisfaction			Positive affect			Negative affect		
	β	R^2	f^2	β	R^2	f^2	β	R^2	f^2
Step 1									
Gender	–.03	.06	.06	.12*	.10	.11	–.02	.04	.04
Age	–.23***			–.28***			.16***		
Step 2									
Crisis	–.15**	.28	.39	.07	.31	.45	–.27	.19	.23
Self-control	.19***			.09			–.09*		
Social support	.33***			.39***			–.36***		
Step 3									
Age \times Social support	–.13**	.28	.41				.11**	.19	.25
Crisis \times Gender				–.18*	.30	.52			
Crisis \times Self-control				.16**	.32				
Self-control \times Social support				.12*	.33				

* $p < .05$; ** $p < .01$; *** $p < .001$

variables, and crisis, self-control, and social support were predictors for each of the three regressions (separately for satisfaction from life, positive affect, and negative affect). From all the possible interactions with the two resources (self-control and social support), we entered only those found significant. The regression analyses revealed that self-control significantly and positively predicted the explained variance for satisfaction from life ($\beta = .19$, $p < .005$) and significantly and negatively predicted the explained variance for negative affect ($\beta = -.09$, $p < .05$), but did not significantly predict positive affect. Social support significantly predicted all three well-being components: positively for satisfaction

from life ($\beta = .33, p < .001$), positively for positive affect ($\beta = .39, p < .001$), and negatively for negative affect ($\beta = -.36, p < .001$).

Moreover, as seen in Fig. 1, a significant interaction emerged between self-control and social support for the prediction of positive affect, but not for the prediction of satisfaction from life or negative affect. To understand this interaction, we divided social support into two groups using Preacher et al. (2006) method of probing interaction in regression analyses, thus comparing groups scoring one standard deviation below and above the median for social support. As seen in Table 1, a high correlation emerged between social support and positive affect in general ($r = .44, p < .001$). Figure 1 also illustrates that adolescents with a higher level of social support had much higher levels of positive affect than adolescents with lower social support at either high or low levels of self-control. As seen in Fig. 2, among adolescents with higher levels of social support, a stronger correlation emerged between self-control and positive affect. This pattern did not emerge among adolescents having lower levels of social support, where the correlation between self-control and positive affect was nonsignificant. Thus, we found that social support moderated the link between self-control and positive affect.

The second hypothesis related to the role of adolescents' age in predicting subjective well-being. As seen in Table 1, age revealed low but significant negative correlations with satisfaction from life ($r = -.25, p < .005$) and with positive affect ($r = -.30, p < .005$) and revealed a low but significant positive correlation with negative affect ($r = .20, p < .005$). In addition, as seen in the first regression shown in Table 2, age significantly predicted the explanation of the variance for all three components of subjective well-being: for satisfaction from life ($\beta = -.23, p < .001$), for positive affect ($\beta = -.28, p < .001$), and for negative affect ($\beta = .16, p < .001$). Thus, supporting the second hypothesis, older age predicted adolescents' lower satisfaction from life, lower positive affect, and higher negative affect.

In addition, as seen in Fig. 2, a significant interaction emerged between age and social support in predicting satisfaction from life. To further understand this interaction, we divided age into two groups using Preacher et al.'s (2006) method of probing interaction in regression analyses (comparing one standard deviation below and above). As seen in the figure, only for younger adolescents, social support predicted higher levels of satisfaction from life. Among older adolescents, the prediction was not significant; thus, age moderated the link between social support and satisfaction from life.

Another significant interaction emerged between age and social support, in predicting negative affect. In this case, as seen in Fig. 3, both younger and older adolescents presented strong significant correlations between social support and negative affect, indicating that higher social support predicted lower negative affect. However, the strength of this prediction (significance level) was higher among the younger adolescents than among the older ones. No significant interaction emerged between age and social support regarding positive affect.

The third hypothesis related to the role of gender differences in predicting subjective well-being. As seen in Table 1, gender revealed a low but significant correlation only with positive affect ($r = .13, p < .05$); hence, girls showed higher levels of positive affect. No significant correlations were found between gender and either satisfaction from life or negative affect. Regression analysis showed that gender did not significantly predict satisfaction from life, positive affect, or negative affect. Also, no significant interaction emerged between gender and either of the resources in predicting subjective well-being.

The fourth hypothesis related to the differences between adolescents who had experienced crisis versus those who had not, as a predictor of subjective well-being. For analyses of crisis, adolescents who marked crisis of any kind experienced in the past year (illness or death in the family, parents' divorce or separation) received a score of 1, whereas no

Fig. 1 Interaction between self-control and social support in predicting positive affect

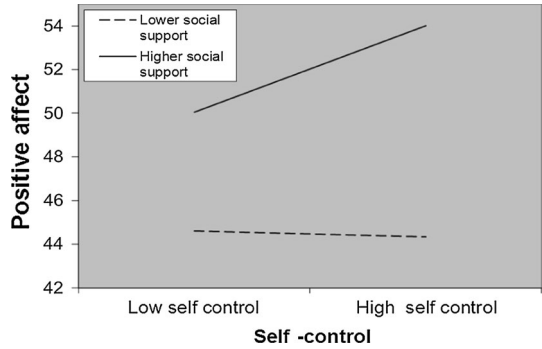


Fig. 2 Interaction between age and social support in predicting life satisfaction

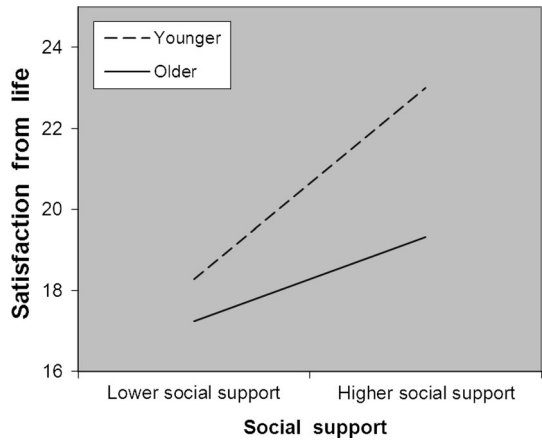
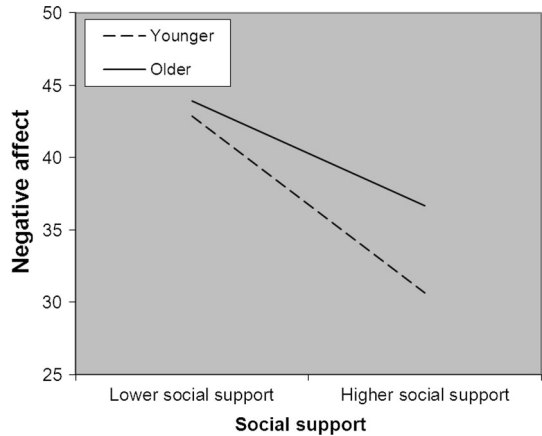


Fig. 3 Interaction between age and social support in predicting negative affect



experience of crisis was scored 0; thus, higher scores related to crisis. As seen in Table 1, as expected, experiencing crisis in adolescence revealed a low but significant negative correlation with satisfaction from life ($r = -.17, p < .01$); however, unexpectedly, crisis

did not correlate significantly with either positive or negative affect. As seen in the three regression analyses presented on Table 2, experiencing crisis significantly predicted the explained variance for adolescents' satisfaction from life ($\beta = -.15, p < .01$), but crisis did not significantly predict the variance in positive or negative affect. Thus, the fourth hypothesis was only partially supported. We did not find crisis to be associated with either positive affect or negative affect. Crisis only predicted lower levels of satisfaction from life.

The fifth hypothesis related to the moderating role of self-control while predicting positive affect. As can be seen in Table 2 as well as in Fig. 4, we found an interaction between crisis and self-control in predicting positive affect but not in predicting satisfaction from life or negative affect. Thus, as expected, self-control moderated the link between crisis and positive affect among adolescents. That is, when adolescents had higher self-control skills, crisis did not change their positive affect, but when adolescents had low levels of self-control, the experience of crisis decreased their levels of positive affect. Unexpectedly, we did not find an interaction between social support and crisis in predicting subjective well-being; therefore, social support did not moderate the link between the two. Hypothesis 5 was only partially supported.

In addition, although we did not predict gender differences regarding subjective well-being of adolescents who experienced crisis, a significant interaction emerged (see Table 2) between crisis and gender in predicting positive affect. As seen in Fig. 5, only among boys (not girls), the experience of crisis predicted lower positive affect.

5 Discussion

Adolescence is a transitional period hallmarked by rapid physical and psychological changes. Most adolescents have the resources to face these challenges without serious problems (Gelhaar et al. 2007). The present study focuses on how coping mechanisms can predict adolescents' subjective well-being in general and at times of crisis in particular. Distress and crisis have been studied before, especially in trying to identify coping mechanisms that can be effective in helping human beings adjust and overcome. However, most studies have focused on the adult population. Our literature review did not find studies of adolescents focusing on a moderation model for adolescents' ability to overcome crisis and maintain positive affect and/or satisfaction of life.

We hypothesized that both self-control and social support would moderate the link between crisis and subjective well-being. However, differently than expected, we found that only self-control moderated the link between crisis and positive affect, where at a time of crisis adolescents with high levels of self-control skills presented positive affect. However, in a normative adolescent period when no crisis was involved, social support was necessary to help adolescents practice the self-control skills that they attained for achieving positive affect. Thus, the outcomes showed that both the personal coping resource of self-control and the environmental coping resource of social support predicted greater subjective well-being in adolescents, by both increasing satisfaction from life and positive affect and by decreasing negative affect. With regard to the role played by developmental factors, adolescents' age predicted all three components of subjective well-being, whereas gender did not predict any of these three components.

The current findings also highlighted that experiencing a crisis was linked to adolescents' cognitive appraisals of well-being (satisfaction from life) but not to their affective

Fig. 4 Interaction between self-control and crisis in predicting positive affect

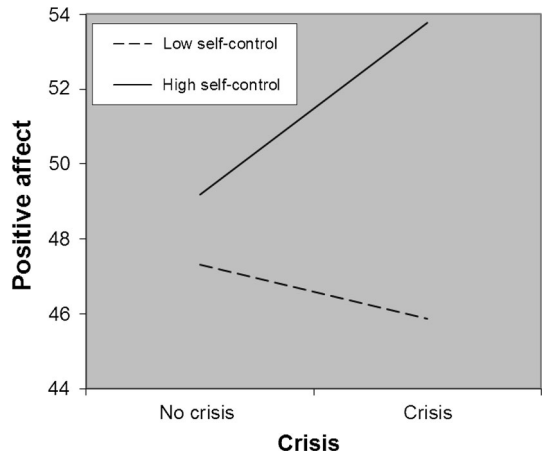
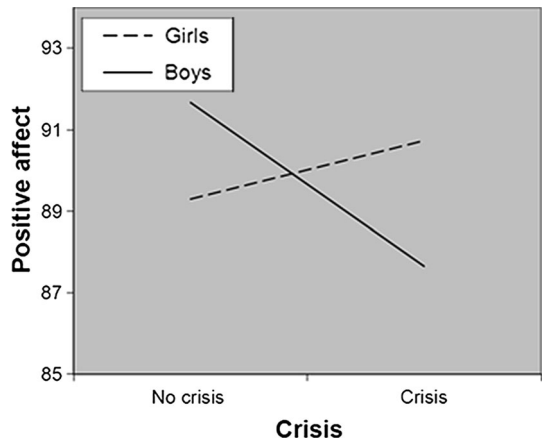


Fig. 5 Interaction between crisis and gender in predicting positive affect



experiences (either negative or positive affect). However, following familial life crisis (such as the death of a parent, divorce of parents, or severe life-threatening illness), the more influential coping mechanism of self-control did predict adolescents' positive affect. That is to say, among adolescents who experienced a familial life crisis, only those with higher levels of self-control expressed higher positive affect. This finding demonstrated that the personal coping resource played a moderating role for adolescents following familial life crisis. This finding coincides with Fredrickson et al. (2003), who suggested that positive emotions are crucial in times of crisis and pay off both in the short-term, by improving subjective experiences, undoing physiological arousal, and enhancing broad-minded coping, and in the long-term, by minimizing depression and building enduring resources, the hallmark of thriving.

5.1 Self-control and Subjective Well-Being

Muraven et al. (2005) and Stucke and Baumeister (2006) claimed that self-control, or self-regulation as they termed it, is an important key to successful human functioning. Tice et al. (2007) suggested that the capacity of the self to exert control, make choices, initiate,

and perform other acts is one of the most important and adaptive functions of the self. With regard to self-control during this developmental period, this personal coping resource was found mainly to predict the current adolescents' cognitive assessments of subjective well-being (perceived satisfaction from life) and their negative affect.

Times of crisis automatically elicit negative emotions but not positive ones; people must work hard to increase their positive emotions at such times (Fredrickson 2009). Self-control, as a coping skill, appeared to play a significant role in helping young people attain positive affect in spite of the familial life crisis they experienced. Yet the question remains: Why didn't self-control in our study relate to negative affect following times of familial life crisis? More studies are needed to explore this question. Meanwhile, the direction of these relations between self-control and positive affect at times of familial life crisis is not yet clear. Tice et al. (2007) suggested, for example, that positive emotional states may facilitate self-regulation due to the fact that positive emotion elicits creativity and thus involves the production of new ideas.

5.2 Social Support and Subjective Well-Being

Social support was found to predict all three components of subjective well-being. The current findings coincide with similar outcomes from prior studies on social support and multiple social relationships that were positively related to subjective well-being (Diener et al. 1999; Dolan et al. 2008). People who enjoy close relationships are found to cope better with various types of stress (Cohen et al. 1997; Myers 2000). Moreover, Halpern (2005) stated that the presence of supportive relationships diminishes the exposure to stress. However, it depends upon the nature of the social relationships (Diener et al. 1999). Previous studies found that social support was associated with adolescents' functioning in general and their sense of competence or mastery in particular (Diener and Fujita 1995). The present study focused on learning whether social support would predict adolescents' subjective well-being in general and at times of crisis in particular.

In the current study, we also found that among adolescents having higher levels of social support, a strong correlation emerged between self-control and positive affect. Finkel and Fitzsimons (2011) claimed that social support is an important domain helping individuals execute self-control. Human beings who have strong social support are stronger, live longer, and cope better—or in other words they more easily use their self-control regulatory system to achieve their goals. Thus, self-regulation may facilitate expressing positive emotion because one can see more possibilities. Furthermore, self-control is a personal coping skill related to a wide range of positive outcomes, including interpersonal success, less pathology and good psychological adjustment (Tangney et al. 2004; Vohs and Faber 2007).

5.3 Age, Gender, and Subjective Well-Being

Age and gender are developmental components that we considered in examining adolescents' well-being. With regard to age, as expected, older age predicted adolescents' lower satisfaction from life, lower positive affect, and higher negative affect. Studies have indicated a U curve representing subjective welfare levels with age. That is, high levels of subjective well-being were evidenced at ages younger and older than adolescence (Dolan et al. 2008). Keyes (2013) claimed that too many tasks and duties prevent American adolescents from flourishing. Thus, in order to better disentangle the directions posited for the way age is related to adolescents' subjective well-being, future research efforts should

be devoted to obtaining longitudinal data. Recent longitudinal research has shown that important changes in coping behavior occur during the course of the adolescent period (Seiffge-Krenke 1995).

With respect to gender, the present study outcomes revealed that it did not predict any of the three components of subjective well-being. However, gender did reveal a significant low correlation with positive affect only, indicating that girls had high levels of positive affect. Studies reported that adolescent females express stronger emotions than males, referring to a higher ability in females to express more complex emotions, and to express a larger range of emotions (Reschly et al. 2008; Ronen et al. 2003; Ronen and Rosenbaum 2010). Considering these studies, the question remains: Why didn't gender relate to negative affect in our study? Recent conceptual and empirical work concerning the structure of affective experience claimed that positive affect and negative affect are delineated as orthogonal dimensions (e.g., Fredrickson 1998; Watson et al. 1999).

Most research carried out on adolescent coping behavior that focused on gender differences regarding stress perceptions (e.g., Frydenberg 1997) reported that females experience more stress than males, which is particularly noticeable concerning relationship stressors. Likewise, research on active coping strategies (e.g., Seiffge-Krenke 1995) reported that females seek more social support, whereas males use more physical-recreation strategies and relaxation. Thus, future research would do well to investigate the underlying processes explaining the current question.

5.4 Familial Crisis and Subjective Well-Being

Many studies have shown a significant correlation between stress and subjective well-being (Natvig et al. 2003; Pascual et al. 2003; Torsheim and Wold 2001). An interesting outcome of the current study is the correlation found between familial crisis and satisfaction from life. That is to say, crisis only predicted lower levels of satisfaction from life but did not predict positive affect or negative affect. A possible approach to explaining this finding may be based on developmental theories claiming that a child's age should be understood also in terms of cognitive maturity. In other words, a child's thinking, understanding, and world view constitute the basis for how the child perceives his or her surroundings and the reasons for what occurs there (Crick and Dodge 1994; Davies 1999; Kazdin 1988; Shirk and Russell 1996). Studies have shown that the way children process information is related not only to how they will respond to an event, but also to how they will feel toward themselves and the world around them (Crick and Dodge 1994; Ronen et al. 2003). Somewhat lower satisfaction from life among older adolescents may stem from adolescents' ability to carry out abstract thinking processes that help them process information about the crisis event and that is associated with the way in which they evaluate satisfaction with life, and as a result their well-being (Ash and Huebner 2001). Future studies should investigate the specific and combined predictions of positive and negative affects surrounding crisis at different points in time and in different contexts.

5.5 Study Implications and Limitations

In conclusion, this study contributes to our knowledge about the link between crisis and subjective well-being and the links between coping resources and subjective well-being among adolescents. Most studies in this area were conducted among adults, and there is not yet enough research on adolescents. Theoretically, this study strengthens previous outcomes regarding the different ways in which coping resources are linked to satisfaction

from life and to positive and negative affect. Familial crisis did seem to connect with satisfaction from life but not with either type of affect. The current findings pinpoint the importance of fostering self-control skills and skills for gaining social support while coping with crisis in order to experience positive affect.

Practically, the outcomes of this study revealed that adolescents, like adults, can be assumed to be cognitively satisfied with life and to experience frequent positive affect and infrequent negative affect (Martin and Huebner 2007). However, in order to experience positive affect, adolescents may need help in gaining social support and self-control skills. Especially, the interaction between the two resources was found to be helpful for experiencing subjective well-being.

Researchers have emphasized the importance of positive affect for human functioning (Aspinwall 1998; Fredrickson 2009; Isen 2000; Isen and Reeve 2005). Positive affect can be achieved by imparting self-control skills for overcoming internal thoughts, emotions, and behaviors that disrupt one's goal achievement, as well as by gaining social support at school and among friends.

Several limitations of the present study should be considered. First, the study questionnaires were based on subjective self-reports. Although subjective well-being can be assessed externally and objectively according to criteria like wealth or income, educational attainment, occupational prestige, and health status, Keyes (2006) claimed that the most important measure is an objective approach to internal and subjective well-being, using a self-reported evaluation or declaration about life quality (Diener et al. 1999; Keyes 2005). However, as with most self-report questionnaires, the current responses may reflect social desirability. Therefore, future studies need to use methods other than self-reports such as peer ratings or performance measures of familial crisis. The second limitation relates to the measuring of "time of crisis." The current results highlighted differences between the two groups (those who did and did not experience crisis) but cannot be interpreted as time-specific, because the crisis could be at any time and of any length in the last 12 months. Hence, longitudinal or retrospective comparisons could be undertaken to compare the same adolescents both in "routine" time and "familial crisis" time.

In sum, this study focused on adolescents' subjective well-being. The outcomes revealed that older adolescents presented lower levels of subjective well-being than younger ones, and that both self-control and social support predicted adolescents' subjective well-being. Moreover, among adolescents who experienced crisis, higher levels of self-control skills predicted higher levels of positive affect.

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