

Health Satisfaction of Emerging Adults who Experienced the Loss of a Parent in Childhood and Adolescence

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Abstract

Objective – The aim of this research was to evaluate the physical and mental health of emerging adults who lost a parent before the age of 18, and to examine the predictors of satisfaction with physical and mental health. **Materials and Methods** – The subjects who participated in this study were emerging adults (18-29 years of age) from Bosnia and Herzegovina and Croatia. For this study, the equivalent pairs method was used - participants who had experienced the death of a parent were matched with those who had not experienced such a loss in relation to the variables of sex, age, and socioeconomic status, comprising a sample of 29 pairs, i.e., 58 subjects - 50 women and 8 men. The research was conducted via an online questionnaire. Participants completed the Psychosomatic Symptoms Questionnaire, CORE-OM questionnaire for evaluation of general psychopathological difficulties, and were asked to rate their satisfaction with their physical and mental health. **Results** – The results show no statistically significant difference between the two groups in the levels of satisfaction with physical health, the presence of physical symptoms, and the presence of general psychopathological difficulties. A statistically significant difference was found between the groups in the level of satisfaction with mental health - those who had experienced the loss of a parent reported lower satisfaction with their mental health. The experience of the loss of a parent explained their mental health satisfaction level, above the results of the standardized measures of mental health. **Conclusion** – The results indicate the need for assessing levels of satisfaction with mental health beyond the assessment of levels of general psychopathological symptoms when working with adults who experienced the early death of a parent.

Key Words: Early Loss of a Parent ■ Physical Health ■ Mental Health ■ Health Satisfaction ■ Emerging Adulthood.

Introduction

Adverse childhood experiences (ACEs) are events or continuous exposure to circumstances beyond a child's control that may negatively affect their well-being (1). Maltreatment in childhood, exposure to household dysfunction, family members' mental health problems, criminality, or the loss of one or both parents are some ACEs (2). ACEs in childhood are frequent, inter-related, and dose-related (1). It is well established that cumulative ACEs can have a long-lasting effect on child development and life course health (3-4). Health risks associated with ACEs include chronic disease, health risk

behaviors, mental health problems, and risk for victimization (5-10).

The death of a parent before the age of majority represents one of the most painful experiences in the life of a child (11-12). Research conducted so far (13-16) showed an association between the loss of parents and serious difficulties in adjustment during childhood, adolescence and adulthood. Study results have shown an increased risk of mental health problems such as anxiety and depression (17), somatic symptoms and development of stress sensitivity (18-19), increased mortality risk during childhood, adolescence and into early adulthood (20-21), and an increased long-term risk

of suicide (22). Many factors can have a mediator or moderator role in the association between the loss of a parent and the short and long-term consequences. Those factors include the child's factors (earlier losses, coping strategies), family and social relationships (including the relationship with the deceased), environmental factors, cultural factors, and the circumstances of the death (23).

A child's age at the moment of loss can influence their maladaptive responses to the loss (14). Some studies show that children who experienced loss earlier in their childhood have serious psychological difficulties (24-25). The loss of a parent during childhood can impact their capacity for establishing and maintaining intimate relationships later in life, and for using stress coping strategies, and successfully transitioning through developmental phases. Children who experience the death of a parent before the age of majority have a 2.16 times greater chance of developing depression in adulthood than people of the same age who did not experience such loss (26).

Studies show that young men who experienced the loss of a parent in early childhood behave aggressively more often than young women do (27) and they also have higher levels of internalized symptoms (28). Parental loss was associated with a higher rate of relationship formation for young women, but not young men, and higher rates of separation for both men and women (29). Other studies found no sex differences in the impact of parental loss on risk for major depression (30), suicide (31) and self-inflicted injuries (32). The results are not consistent regarding the differences in psychological adaptation between cases of the mother's death and the father's death. Weller et al. (33) established significantly more symptoms of depression in cases where children lost their father compared to cases where children lost their mother. Other studies (34-35) did not find any differences in the level of symptoms of depression between cases where the father had died and cases where the mother had died. The cause of death is also considered to be one of the possible risk factors for developing psychopathological disorders. Children

who lose a parent as a consequence of an accident, suicide, or homicide have a greater risk of developing long-term psychological problems compared to children who lose their parents due to personal causes of death (36-37).

A few studies have considered the long-term consequences of the loss of a parent in childhood (38), especially during the stage of emerging adulthood. Emerging adulthood is a life stage during which young adults transition to adulthood, but they are not yet adults. This period usually spans from 18 to 29 years (39-41). This stage is different from adolescence and young adulthood, and has five distinguishing features. These five features are: identity exploration, instability, self-focus, feeling in-between, and possibilities/optimism (39). Some believe that this stage is critical and one of the most unstable periods of life (40, 42). Emerging adulthood is not characterized by obvious physical changes; nevertheless, changes are numerous, such as changes of living situations, changes of primary and partner relationships, transition from school to work, job changes, new roles. All those changes cause instability and insecurity (43). This can lead to the risk of mental health problems (40, 44). In no other period, except for infancy, are such dynamic and complex changes present in the personal, social, emotional, and neuroanatomic realms (43). Certain predispositions contribute to mental health problems in addition to the features of this period. Individual features related to family functioning, such as divorce, the loss of a parent and dysfunctional parenting, contribute to the development of mental disorders (45). About three-quarters of lifelong psychological, emotional, and behavioral disorders have their onset before the age of 24 years (46). Psychological disorders in emerging adulthood complicate adaptation and reduce the probability of a successful transition to adulthood. For example, psychological disorders are predictors of lower levels of education (47), lower work productivity (48), and higher marriage instability (49). Any psychological disorder in this age group increases the risk of problems in general functioning (50).

Numerous subjective measures have been developed to assess physical and mental health (51). Subjective indicators of health are global indicators that include psychological and social aspects. For this reason, they are closer than objective health indicators to the WHO definition of health: a complete state of physical, mental, and social wellbeing. Furthermore, numerous studies have acknowledged their validity and the advantages of using such indicators (e.g., 52-53). Subjective health or health self-assessment is influenced by biological and numerous non-biological factors: personality, motivation, socioeconomic status, availability of health care, the social support system, personal and cultural beliefs, and health behaviors (54). Most subjective health measures rely on verbal reports and avoid observation (55). Although this is a subjective health indicator, numerous studies, including one using GSOEP data, have shown that measures of self-rated and self-perceived health are reliable (56) and valid in different ethnic groups (57).

The question “How would you rate your health?” is often used as a unidimensional health measure (58), which means that all aspects of someone’s health are shown through one measure. One of the advantages of such measures is simplicity. Many previous studies have used a single item to measure health satisfaction or other similar constructs, such as a self-rated health status, showing the good performance and good psychometric properties of these types of ‘tools’ (59-60).

Physical symptoms are integral components of different psychological problems and disorders, especially the group of anxious and depressive disorders (61). When physical symptoms appear under the influence of emotional factors and include an organ system controlled by the autonomic nervous system, the symptoms are called psychosomatic symptoms. They are a normal part of development when low in intensity. However, when they become uncomfortable and disturb everyday functioning, they can lead to organ damage and the development of psychological disorders (61).

On the basis of previous research and the postulates of developmental psychopathology, the goal

of this research was to test differences in the levels of physical and mental health satisfaction, and the presence of physical symptoms and general psychopathological difficulties between those who had lost a parent before the age of majority and those who had not. Additionally, the goal was to predict physical and mental health satisfaction with sociodemographic variables, physical symptoms, general psychopathological symptoms, and parental loss.

Subjects and Methods

Subjects

A total of 387 men and women aged from 18 to 29 years completed the survey. In the final sample, 58 participants were included, 29 participants who had experienced the loss of a parent and 29 participants who had not experienced such a loss. Participants in the two groups were matched in terms of socio-demographic variables - sex, age, and socioeconomic status. The final sample comprised 29 matched pairs. When matching pairs, there was no discrepancy regarding sex and age. A difference in a maximum of one category relating to socioeconomic status was tolerated. In the final sample, there were 50 women and eight men. Their average age was $M = C = 23$; $D = 20$. Age ranged from 18 to 29 years. In the group of participants who had experienced the loss of a parent, 19 participants lost their father, nine lost their mother, and one participant lost both parents. Fifteen participants lost their father due to illness, two each as a casualty of war and to suicide, and one participant due to a traffic accident. Nine participants lost their mother due to illness, and one due to suicide.

Measuring Instruments

Demographic Characteristics – For this study, the authors created a sociodemographic questionnaire that gathered information about the participants’ sex, age, and socioeconomic status, whether they had experienced the death of a parent before the

age of 18, and if so, whom they had lost, and the cause of death.

CORE-OM. Clinical Outcomes in Routine Evaluation - Outcome Measure (62) is a measure that is conceptualized as a pan-theoretical and pan-diagnostic measure of general psychological distress. CORE-OM consists of 34 items. Participants need to assess on a Likert scale how often they had felt like the way described in the past two weeks (0 - not at all, 1 - only occasionally, 2 - sometimes, 3 - often, 4 - more or less all the time). The items are divided into four main domains: wellbeing (4 items, e.g. "I have felt optimistic about my future."), problems (12 items, e.g., "Unwanted images or images have been distressing me."), functioning (12 items, e.g., "I have been able to do most of the things I needed to do.") and risk (6 items, e.g., "I have thought it would be better if I were dead."). The items include different intensities of disruptions, to enhance the sensitivity of the measurement. A quarter of the items consist of positive content. The total score and the scores on different dimensions are calculated as an average result (the sum of items divided by all the items comprising a scale or a domain). The higher the total score and scores on separate dimensions, the more problems and disturbances a person experiences. This also applies to the dimension of wellbeing, where a higher score indicates a lower wellbeing, i.e. more difficulties in that domain. The CORE-OM was standardized for the Croatian sample (63). Studies show that CORE-OM has satisfactory reliability, expressed through a measure of internal consistency, at around 0.90 for the whole scale (63-65). Reliability scores in this study are satisfactory, and they range from $\alpha=0.76$ for the risk dimension, to $\alpha=0.93$ for the dimension of problems.

The Psychosomatic Symptoms Questionnaire – (PSS) (61) is an instrument for assessment of physical symptoms for persons from the age of 10 and above. It consists of 35 physical symptoms and additional questions intended to collect data about other relevant health status indicators. The 35 physical symptoms include: headaches, vertigo, back pain, lack of energy/fatigue, high body

temperature, pain in joints, pain in arms or/and legs, loss of balance, muscle tenseness, muscle weakness, lump in throat, double vision, blurred vision, sudden loss of sight, sudden loss of hearing, fainting, sudden memory loss, heart beating too fast, pain in chest, nausea, pain in stomach, diarrhea, vomiting, bloated stomach, appetite loss, food intolerance, constipation, heart-burn, breathing difficulties, sense of choking, skin rash, skin itching/redness, acne and pimples, cold (sore throat, cough, etc.), and over-perspiration. The total score is the sum of the answers to the items, i.e. symptoms. Every symptom in this questionnaire is assessed on two scales - the frequency scale, consisting of 4 points (1 - Never, 2 - A few times a month, 3 - A few times a week, 4 - Almost every day), and the disturbance in the everyday activities scale, consisting of 3 points (1 - Not at all, 2 - A little, 3 - A lot). One of the components consists of additional questions. At the end of the list of symptoms there are additional questions: a question that indicates the severity of the aforementioned symptoms ("Have you had to visit the doctor because of your health-related problems?") where participants answer by choosing the Yes or No option, a question that gives an insight into the presence of diseases ("Do you have a disease such as asthma, allergies, diabetes, etc.?"), with the same format of answers. If the answer is Yes, the participant is asked to indicate the disease. Some of the items in the original form were not analyzed in this study: symptom clusters (seven symptom clusters), an item for assessment of health status ("How would you rate your health in general?"), items assessing medicine consumption, as well as four items assessing the experience of pain and painkiller consumption. In this study, the results were analyzed and interpreted using three indicators: 1) the number and 2) frequency of symptoms experienced by the person in the last three months, and 3) the severity and degree of impairment of daily life due to those symptoms. The reliability of the PSS expressed through the internal consistency coefficient was satisfactory: for the frequency of symptoms scale, the Cronbach alpha coefficient was $\alpha=0.89$, and for the severity scale,

the coefficient was $\alpha=0.91$ (61). In this study, the Cronbach alpha coefficients were $\alpha=0.85$ for the frequency of symptoms scale and $\alpha=0.90$ for the severity scale.

Additional Items for Assessment of Physical and Mental Health – The authors of this study created items to assess whether participants had ever had serious health problems that demanded hospitalization (“Have you ever had to be hospitalized?”).

Physical and Mental Health Satisfaction – Participants responded to two items (“How satisfied are you with your physical health?” and “How satisfied are you with your mental health?”) on a seven-point scale (1 - it could not be worse; 7 - could not be better).

The Procedure and Ethical Aspects of the Research

All the procedures and materials for the study were approved by the Ethics Committee of the Department of Psychology of the Faculty of Humanities and Social Sciences of the University of Mostar. The research was conducted from the end of March to the beginning of April 2021, via an online questionnaire. The authors sent invitations to the representatives of different faculties of various universities in Bosnia and Herzegovina and Croatia. The representatives were asked to send a link to students for the online questionnaire and an invitation for participation. Links with invitations were also posted in various groups on Facebook. In the invitation, participants were asked to share the invitation with others aged 18 to 29 years. At the beginning of the questionnaire, the following pieces of information were stated in the instructions: the purpose of the study, that the participants’ anonymity is guaranteed, that participants can withdraw from the research at any point and that there are no right and wrong answers. The estimated time for finishing the questionnaire was 15 minutes. It was emphasized that the data would be analyzed on a group level and that honesty is required from participants. The authors listed the contact of the Student Counseling Center of the University of Mostar. Participants could contact the center if

they felt bad during or after participation in this study. They also indicated their contact information so that participants could contact them if they had any questions about the research. The last page contained a thank you message.

Statistical Analysis

Before using parametric statistical analyses, the authors tested if certain assumptions were met, and then, if they were, they used parametric statistical analyses. A paired t-test was used on the whole sample to assess the presence of differences between two variables. Furthermore, independent t-tests were used to assess the presence of differences between two groups based on the experience of the death of a parent. When checking the presence of differences in the data on the nominal scale, chi-square tests were used. Finally, hierarchical regression analyses were used to predict physical and mental health satisfaction. Bivariate correlations were assessed before including variables in the regression model. The level of statistical significance used was $P<0.05$, with $P<0.01$ also indicated. IBM SPSS Statistics 23 and Microsoft Excel 2016 were used to analyze the data.

Results

Table 1 presents means, standard deviations, minimum, maximum, the score on the Kolmogorov-Smirnov test of normality, and indexes of skewness and kurtosis, physical and mental health satisfaction, and the scales and subscales of the Psychosomatic Symptoms Questionnaire and CORE-OM.

From examination of the means and distributions of the physical and mental health satisfaction assessment, it is apparent that the distributions are negatively skewed, which means that participants reported high levels of physical and mental health. The distribution of results on the Psychosomatic Symptoms Questionnaire and CORE-OM are positively skewed, which implies that participants reported lower levels of psychosomatic symptoms and general psychological distress. None of the

Table 1. Descriptive Statistics on Variables of Physical and Mental Health Satisfaction, Psychosomatic Symptoms Questionnaire and CORE-OM (N=58)

Variables	M	SD	Min	Max	K-S	Skewness	Kurtosis
Health satisfaction							
Physical health satisfaction	5.3	0.91	3	7	0.24*	-0.26	-0.58
Mental health satisfaction	4.8	1.51	1	7	0.20*	-0.49	-0.52
Psychosomatic symptoms questionnaire							
Frequency of symptoms	51.3	8.96	40	76	0.14*	1.13	0.91
Distress	45.1	8.60	35	70	0.21*	1.34	1.15
Number of symptoms	12.7	5.75	4	27	0.13†	0.74	-0.10
General psychological disturbance							
Total score	1.2	0.73	0.12	3.65	0.16*	1.07	1.05
Wellbeing	1.9	0.66	0.75	3.25	0.12†	0.04	-0.76
Problems	1.5	0.93	0.17	3.92	0.16*	0.74	-0.31
Functioning	1.2	0.92	0.08	3.75	0.17*	1.13	1.88
Risk	0.2	0.44	0	2.83	0.30*	3.99	21.57

M=Mean; SD=Standard deviation; K-S= Kolmogorov-Smirnov test for normality; *P<0.01; †P<0.05.

distributions is normally distributed. Nevertheless, with additional inspection of skewness, kurtosis, and the shapes of distributions, it was concluded that all of the variables, except the result on the Risk subscale, met the criteria for conducting the parametric statistical tests. The Risk subscale was not analyzed further. There was a statistically significant difference between the physical and mental health satisfaction assessments ($t=2.535$; $df=57$; $P<0.05$). Generally, participants were more satisfied with their physical health.

Table 2 shows the differences between the loss and no-loss groups in physical and mental health satisfaction and psychosomatic symptoms.

Results show that there were no statistically significant differences between the loss and no-loss groups in the level of physical health satisfaction ($t=0.719$; $df=56$; $P>0.05$). Differences were found in the level of mental health satisfaction ($t=2.059$; $df=56$; $P<0.05$). Participants in the loss group reported lower levels of mental health satisfaction than the participants in the no-loss group. Within the Psychosomatic Symptoms Questionnaire, there were no statistically significant differences between the loss and no-loss groups in the frequency

of psychosomatic symptoms ($t=-0.744$; $df=56$; $P>0.05$), level of disturbance ($t=-0.945$; $df=56$; $P>0.05$) and the total number of psychosomatic symptoms ($t=-0.363$; $df=56$; $P>0.05$). In both groups, there was an equal number and frequency of psychosomatic symptoms, as well as the level of disturbance. Furthermore, there were no statistically significant differences between the two groups in the levels of general psychological distress ($t=-0.853$; $df=56$; $P>0.05$), or on the subscales within CORE-OM: wellbeing ($t=-1.051$; $df=56$; $P>0.05$), problems ($t=-0.776$; $df=56$; $P>0.05$), and functioning ($t=-1.179$; $df=56$; $P>0.05$). Both groups reported equal levels of general psychological distress, wellbeing, problems and functioning.

Table 3 shows differences between the loss and no-loss groups in existences, medical, appointments, and hospitalization.

A statistically significant difference between the two groups was found in the frequency of medical appointments ($\chi^2=4.350$; $df=1$; $P<0.05$). Those who lost a parent visited the doctor more than those who had not experienced such a loss. No statistically significant difference was found between the groups in the frequency of diseases present

Table 2. Differences in the Results of Physical and Mental Health Satisfaction, Scores on Psychosomatic Symptoms Questionnaire and CORE-OM, between the Loss and No-loss Group (N=58)

Variables	Groups regarding the experience of the loss of a parent				Statistics		
	Participants with loss of a parent (N=29)		Participants without the loss of a parent (N=29)				
	M	SD	M	SD	t-test	df	P
Health satisfaction							
Physical health satisfaction	5.3	0.86	5.2	0.97	0.719	56	0.475
Mental health satisfaction	5.2	1.57	4.5	1.35	2.059	56	0.044
Psychosomatic symptoms questionnaire							
Frequency of symptoms	50.5	7.80	52.2	10.05	0-0.744	56	0.460
Distress	44.1	8.52	46.2	8.70	0-0.945	56	0.349
Number of symptoms	12.4	5.41	12.9	6.15	0-0.363	56	0.718
General psychological disturbance							
Total score	1.3	0.63	1.1	0.84	-0.853	56	0.397
Wellbeing	1.9	0.67	2	0.64	-1.051	56	0.298
Problems	1.42	1.04	1.6	0.82	-0.776	56	0.441
Functioning	1.0	0.79	1.3	0.63	-1.179	56	0.244

Table 3. Differences in the Presence of Medical Appointments, the Existence of Diseases, and Hospitalizations between the Loss and No-loss Group (N=58)

Variables	Groups regarding the experience of the loss of a parent				Statistics		
	No-loss group (N=29)		Loss group (N=29)				
	f _o	f _t	f _o	f _t	χ ²	df	P
No medical appointments	27	24.0	21	24.0	4.350	1	0.037
Medical appointment (s)	2	5.0	8	5.0			
No existence of diseases	24	21.0	18	21.0	3.107	1	0.078
Existence of (a) disease (s)	5	8.0	11	8.0			
No hospitalizations	15	15.5	16	15.5	0.279	1	0.597
Hospitalization(s)	14	13.5	13	13.5			

f_o=Observed frequencies; f_tTheoretical frequencies.

($\chi^2=3.107$; $df=1$; $P>0.05$). The difference was not statistically significant, but it was near to the level of significance. The following trend could be observed in the results: those who lost a parent suffered from more diseases. The following diseases were reported: allergy diseases (N=11), autoimmune diseases (N=2), mood disorders (N=1), reproductive system diseases (N=1), and thyroid disease (N=1). The difference in the frequency of hospitalizations between the two groups was not statistically significant ($\chi^2=0.069$; $df=1$; $P>0.05$).

To predict physical and mental health satisfaction levels, hierarchical regression analyses were conducted in four steps. The predictor variables were sex and age, the experience of the loss of a parent, physical symptoms, and general psychological disturbances (Table 4). To check the assumption of lower correlations between predictors, and higher correlations between predictors and the criterion variable, bivariate correlations were examined. In the first step, gender and age were entered. In the second step, the experience of the loss of a parent

Table 4. Predictions of Physical and Mental Health Satisfaction Levels Using Hierarchical Regression Analyses (N=58)

Added groups of predictors	Health satisfaction							
	Physical health satisfaction				Mental health satisfaction			
	1 st step	2 nd step	3 rd step	4 th step	1 st step	2 nd step	3 rd step	4 th step
	β	β	β	β	β	β	β	β
1. Gender	-0.17	-0.17	-0.05	-0.03	-0.35*	-0.35*	-0.19	-0.13
2. Age	0.07	0.07	0.11	0.08	0.04	0.04	0.09	0.01
3. Experience of a loss of a parent	-	-0.10	-0.06	-0.04	-	-0.27 [†]	-0.21 [†]	-0.18 [†]
4. Freq. psychosom. symp.	-	-	-0.41*	-0.22	-	-	-0.54*	-0.09
5. Total score (CORE-OM)	-	-	-	-0.29	-	-	-	-0.71*
R	0.18	0.20	0.43 [†]	0.48 [†]	0.35 [†]	0.44 [†]	0.67*	0.85*
R ²	0.03	0.04	0.19 [†]	0.23 [†]	0.12 [†]	0.19 [†]	0.45*	0.72*
Δ R ²		0.01	0.15*	0.05		0.07 [†]	0.26*	0.28*
Adjusted R ²	-0.01	-0.01	0.12 [†]	0.16 [†]	0.09 [†]	0.14 [†]	0.40*	0.70*

β=Beta ponders; R=The multiple correlation coefficient; R²=The coefficient of determination; Δ R²=R square change; *P<0.01; [†]P<0.05, Two-tailed.

was entered, followed by the frequency of psychosomatic symptoms in the third step, and general psychological distress in the fourth.

When the levels of physical health satisfaction were predicted, differences in gender, age and the experience of a loss were not statistically significant. In the third step, when the frequency of psychosomatic symptoms was entered, the model became statistically significant, and that variable was the only statistically significant predictor. The more frequent the psychosomatic symptoms were, the lower the physical health satisfaction participants experienced. After entering the total score on the CORE-OM in the fourth step, the model remained statistically significant, but none of the partial regression coefficients were statistically significant - the significance of the frequency of psychosomatic symptoms was lost. Predictors explained 15.9% of the criterion variable of physical health satisfaction. When predicting the mental health satisfaction levels, gender was statistically significant in the first step - women reported lower levels of mental health. In the first step, the predictors explained a total of 8.7% of the variance of the criterion variable. When the “experience of loss” variable was brought in the second step, the percentage of the explained variance rose to 14.4%, and

the loss variable was statistically significant. Those who experienced the loss of a parent were less satisfied with their mental health. In this step, gender maintained its significance. In the third step, the frequency of the psychosomatic symptoms variable was entered and was shown to be significant. Those who had a lower frequency of psychosomatic symptoms were more satisfied with their mental health. In this step, the significance of gender was lost, but the predictive value of the loss experience remained significant. Predictors explained a total of 40.3% of the criterion variable. In the last step, when the total score from CORE-OM was entered, the percentage of the explained variance rose to 69.6%. The variables that predicted lower satisfaction with mental health were the experience of loss and general psychological disturbance. Although the more objective measure of mental health had the higher partial regression coefficient, the experience of loss maintained its predictive value.

Discussion

The main findings of this study indicate that emerging adults who had experienced the death of a parent were less satisfied with their mental health, and that the experience of such a loss can additionally

explain the mental health satisfaction level, above the results on the standardized measures of mental health. A difference was found in the levels of physical and mental health satisfaction in the whole sample. Participants were more satisfied with their physical than their mental health. A study that used similar variables, tested differences in self-reported levels of physical, mental, and general health (66). They found that the levels of mental health were highest, which is not in line with this study's findings. However, the population was different. In that study, age groups above 21 years were included, while in this study the targeted population was emerging adults. High levels of physical health in emerging adulthood are not surprising. In a period that has low rates of physical illnesses, it is expected that physical health satisfaction would be high. The finding of lower levels of mental health satisfaction supports the postulate of emerging adulthood as a dynamic period (40, 42). In emerging adulthood, there are a large number of different developmental trajectories, and this period is characterized by instability and a continuing search for identity (40, 43, 44). These aspects of this period can lead to higher rates of mental health problems than in previous periods. According to Arnett (40), a general feeling of depression and anxiety is more prominent in this period than in other periods.

Our results show an absence of any differences in the levels of physical health satisfaction and the presence of physical symptoms between the loss and no-loss groups. A study that also used self-reported measures of the physical health of adults who had lost a parent at a young age predicted poorer health in adulthood (67). More research using standardized measures for assessment of physical health showed poorer physical health and higher mortality rates amongst adults who experienced the early loss of a parent (68-70). However, some studies (23, 71, 72) indicate that the early loss of a parent does not necessarily lead to the development of physical and mental problems. The emphasis was on the variables that may play a role as risk and protective factors in explaining different health outcomes, and on the development of positive mental health,

specifically the development of resilience, as one of the possible outcomes of adverse experiences (73). In this study, not all of the important variables in the formation of different outcomes of physical health were controlled. This may have led to the inability to differentiate between positive and negative outcomes in the group that experienced the loss of a parent. A potential explanation could be what we have already mentioned - in emerging adulthood there is low variability in levels of physical health. Emerging adults are a more homogenous group than other age groups in terms of their level of physical health. In that period, they experience the peak of their physical health, which could result in high assessments, regardless of the group (loss, no-loss) to which they belong. Another possible explanation is the small sample size. This could have decreased the possibility of detecting different physical states and illnesses that could be connected to the loss of a parent (74).

Although there were no differences in the level of physical health satisfaction between the loss and no-loss groups, the difference in the frequency of doctor's appointments because of health issues was significant. A similar trend was observed for the variable of the existence of a disease. Those who had lost a parent reported more cases of specific diseases (allergic diseases, autoimmune diseases, and thyroid disease). Why are the different measures of physical health inconsistent? Is one of the possible explanations of the more frequent medical appointments in the loss group that the prevalent cause of parental death in this study (death due to natural causes - illness) is the reason why those who had that experience also have the need to monitor their health, and that they respond to the smallest signs of potential health problems by going to a doctor? Furthermore, the instrument used to assess psychosomatic symptoms certainly did not cover the broad spectrum of physical symptoms and physical illnesses that could be connected to adverse childhood experiences (18, 68, 75).

Differences were found between the loss and no-loss groups in the levels of mental health satisfaction. Emerging adults who experienced the

death of a parent before the age of majority reported lower levels of mental health satisfaction. No difference was found between the two groups regarding the presence of general psychological distress. Why were differences found between the two groups on the level of mental health satisfaction but were not found in the total CORE-OM score? The assumption is that the method of assessment of satisfaction is more saturated with subjective factors (54), where participants need to give a general assessment of their mental health. That assessment can be related to their current, transient state, more so than is the case when assessing mental health using a standardized questionnaire. In CORE-OM, assessments need to be made for a longer period - the previous week. Furthermore, CORE-OM encompasses several measurements for which there is proof of their content validity. On the other hand, mental health satisfaction was measured with one item, saturated with their individual experience of what mental health represents. Research suggests that poorer mental health self-assessments are connected to stress, depressive symptoms, restrictions in activities, and role performance. Research also indicates that self-assessment and self-reported measures cannot replace the results of specific standardized measures (76-77). The correlations between self-assessment and the number of mental health measures are strong and consistent, although some patients with diagnosed mental illnesses do not report poor mental health (77). Despite the non-significant difference in this study on the level of global psychological distress (using standardized measures), an important implication, in the sense of asking for professional help, may be the finding of the lower mental health satisfaction of those who had had to deal with the loss of an attachment figure. Mawani & Gilmour (77) state that the perception of a lower level of mental health can play an important part in searching for professional help.

When the predictivity of the chosen variables was studied in regression models, where physical and mental health satisfaction were criterion variables, none of the variables showed statistical significance when predicting the level of physical

health satisfaction. The experience of loss and the general score from CORE-OM were shown to be statistically significant variables in explaining the level of mental health. In the prediction of physical health satisfaction, it is interesting to observe that the frequency of psychosomatic symptoms was not a significant predictor in the complete model. The frequency had significant predictive value in explaining physical health satisfaction until it was entered into the total score on CORE-OM in the model. One of the possible explanations of the loss of significance of the frequency of psychosomatic symptoms in explaining physical health satisfaction may be the following proposition: General psychological distress probably explains a similar part of the criterion variance (a lower level of general psychological distress, a higher level of physical health satisfaction) as the frequency of psychosomatic symptoms. Probably some other variables that are not included in this model can better explain physical health satisfaction. In predicting the lower levels of mental health satisfaction, a higher level of general psychological distress and the experience of the loss of a parent had significant predictive value. Besides the general level of psychological symptoms, the additional criterion variance was explained by the experience of loss, which is in line with what we have already mentioned - perception of one's own mental health can be a key factor in searching for professional help. Maybe those who experienced an early loss are well adapted and have no disturbances in their everyday functioning, but still perceive lower levels and less satisfaction with their mental health. They may also feel the need to work through the experience of parental loss.

Limitation of the Present Study

The limitations of the present study are as follows: first, a relatively small sample could lead to lower levels of statistical power. In the present study, variables that can be important for better understanding the levels of physical and mental health of those who experienced the early loss of a parent, such as age at the moment of loss, the interaction of the

gender of the parent and the child, the nature of the loss, and the amount of support received, were not included. Another limitation is the unequal gender distribution in both groups. Furthermore, the fact that this was a cross-sectional study makes it impossible to draw conclusions about the causal connection between adverse childhood experiences and later outcomes for physical and mental health. Another limitation that possibly led to potential sample bias is conducting the research online. Those who were motivated to participate were probably more willing to report their health and experiences. It is also possible that those who were the most affected by adverse childhood experiences were the least ready to “talk” about those experiences and outcomes - which could have influenced the collected data. Finally, it is difficult to conclude more about the period of emerging adulthood in the context of parental loss because outcomes were investigated only in the period of emerging adulthood which prevents us from making comparisons across periods.

Future Directions

Implications for future research that could be important for testing the existing theoretical perspectives, as well as developing new models, should be taken into account. More detailed research of the variables that may be connected to the experience of loss is needed, such as those mentioned earlier. It would be advisable for samples to have an equal gender distribution. To draw conclusions about the causal connection between adverse childhood experiences and later outcomes for physical and mental health, studies should be longitudinal. Children who have lost a parent should be examined in several waves - starting from the point before the loss, and at other developmental periods. To compare the nature of outcomes, physical and mental health outcomes of early parental death should be examined in different periods, ranging from emerging adulthood to late adulthood. Besides research on maladaptive outcomes, future research should focus on studying the development of positive mental

health, specifically, the development of resilience, the construct that appears to be a significant, positive outcome of traumatic experiences (78). It is vital to examine non-pathological, adaptive outcomes after bereavement, such as finding meaning in the adaptation to loss, and the development of resilience. Studying such outcomes can help in understanding different and numerous grieving paths. The implication of this study for practice is the satisfaction with mental health mentioned earlier. Although standardized measures can indicate that there is no psychopathology present, it is important to know the patient’s self-perception and satisfaction with health. Quick mental health assessments that are predictive for clients’ inclusion in treatment are also important because of the limited resources in the field of mental health care (79), as well as the fact that they predict a global measure of health ten times stronger than any other more objective health indicator (66).

Conclusion

While levels of physical health satisfaction and the presence of psychosomatic symptoms did not differ between the two groups of emerging adults, those who had experienced the loss of a parent before the age of majority assessed their level of mental health satisfaction as lower. There was no difference in the level of global psychological disturbance. The use of health assessment as an indicator of the need for treatment is highlighted. Lower levels of mental health satisfaction, above the level of general psychopathological symptoms, were explained by the experience of the loss of a parent. Quick health assessments, such as the level of mental health satisfaction, can be an important source for assessing the need for clients’ inclusion in treatment.

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