



Psychological Maltreatment, Psychological Adjustment, Family Communication, and Mental Wellbeing: A Longitudinal Serial Mediation Study

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Abstract

The fact that the relationships between psychological maltreatment, psychological adjustment, family communication and mental wellbeing have not been examined together in any longitudinal study has created a gap in the literature. In this study, a longitudinal design was used to examine whether psychological adjustment and family communication serially mediate the relationship between psychological maltreatment and mental wellbeing in a Turkish adults (age range=19–63 years). Structural equation modelling (SEM) was used to test longitudinal serial mediation at two time waves SEM indicated that psychological adjustment and family communication have a longitudinal serial mediating role in the association between psychological maltreatment and mental wellbeing. Current research reveals that psychological adjustment and family communication are powerful tools for the wellbeing of those who have experienced psychological maltreatment.

Keywords Psychological maltreatment · Psychological adjustment · Family communication · Mental wellbeing · Longitudinal serial mediation

Introduction

Psychological maltreatment is defined as the family repeatedly making the individual feel worthless, unloved, flawed, and unwanted (Hart & Glasser, 2011). It is a universal problem that includes humiliation, neglect, rejection and threats on the basis of psychological maltreatment [The American Professional Society on Abuse of Children (APSAC), 2019], and it is described as a public health problem in the literature [Child Welfare Information Gateway (CWIG), 2022], and to which nearly 300 million children in the world are exposed by their families (WHO, 2020). Psychological

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maltreatment is explained as the most common and often reported kind of abuse, although not being as thoroughly researched as physical or sexual abuse (Stoltenborgh et al., 2015). According to recent studies, individuals who experience psychological maltreatment by their families suffer from certain cognitive, emotional, and physical problems (e.g., Hart et al., 2022; İnç et al., 2022; Watts et al., 2022). These studies reveal how psychological maltreatment has a negative impact on various aspects of individuals' life.

Individuals who suffer psychological maltreatment from their families, especially in childhood, can be more emotionally worn out. The studies in the literature report that this emotional wear from childhood reveals itself in adulthood (e.g., Genç & Arslan, 2022; Jaffee, 2017). According to the aforementioned studies, individuals are more likely to engage in negative behaviors in the adulthood because of the psychological maltreatment they experienced as children from their caretakers. Maladaptive behavior on the part of the individual, both within oneself and in her interpersonal relationships, is one of these negative behaviors. In particular, it has been reported in the literature that individuals who experience psychological maltreatment from their parents become withdrawn (Harper & Arias, 2004), have a worse degree of psychological adjustment (Cicchetti et al., 1993; Higgins & McCabe, 2000), and participate in more maladaptive behaviors (Meyerson et al., 2002). Similarly, Sesar et al., (2008) found that psychological maltreatment has an effect on people's ability to psychological adjustment. A recent study also demonstrated the negative effect of psychological maltreatment on psychological adjustment (Arslan, 2022). Adjustment, one of the most essential indicators of mental health (Yıldırım & Solmaz, 2021), is defined as the process of adapting to all of life's changes (Seaton, 2009). Psychological adjustment is expressed by an individual's satisfaction with his/her current situation (Chambers et al., 2017), and the ability to cope with challenges of life (Bender et al., 2019). On the basis of all these findings and definitions found in the literature, psychological maltreatment, one of the difficulties that people may face throughout their life, can negatively impact psychological adjustment.

Psychological maltreatment can also harm individuals in areas other than psychological adjustment. Family communication and psychological adjustment can be adversely affected by the exposure to psychological maltreatment by their families. For instance, Burgess & Conger (1978) revealed that individuals who had experienced psychological maltreatment had poorer family communication. Similar findings were obtained in other studies in the literature (e.g., Gaudin et al., 1996; Paavilainen et al., 2001). These research demonstrate that psychological maltreatment affects family communication. Family communication is described as the sum of verbal and non-verbal responses that enable family members to develop family harmony with one another and help them in problem-solving (Segrin & Flora, 2005; Taipale, 2019). As can be understood this definition, strong family communication enables individuals to maintain healthy relationships within the family and, thus, protects individuals' mental health.

Considering the adverse effects of psychological maltreatment on psychological adjustment and family communication as a whole, this circumstance may also have a negative impact on individuals' mental health. In other words, psychological maltreatment can directly predict the mental wellbeing of individuals, as well as

indirectly affect them negatively through psychological adjustment and family communication. This idea is in line with the findings of recent studies. For instance, in the study conducted by Arslan & Genç (2022), psychological maltreatment was reported to predict individuals' mental health. The study of Chen et al., (2021) also stated that one of the determinants of mental health is psychological maltreatment. Other studies have also demonstrated that there are significant relationships between psychological maltreatment and mental wellbeing (e.g., Cooke et al., 2019; Kaufmann et al., 2019; Orsi et al., 2018). Apart from these studies, there are studies showing that there are significant relationships between psychological adjustment and mental wellbeing (e.g., Bantjes & Kagee 2018; Zheng et al., 2004), and between family communication and mental wellbeing (e.g., Bacigalupe & Bräuninger 2017; Fa'alau & Jensen, 2006).

The Present Study

The purpose of this research is to investigate the mediating role of psychological adjustment and family communication in the relationship between psychological maltreatment and mental wellbeing through a longitudinal serial mediation analysis. In consequence of psychological maltreatment from the caretakers, the social and behavioral skills of individuals are negatively affected (Hart et al., 2022). Therefore, maladaptive behaviors can occur in individuals. Apart from this, the psychological maltreatment that the individual is exposed to in their family harms the family relations (Kaya & Çeçen-Eroğul, 2013). Besides, damage to relationships can weaken family communication. When evaluated as a whole, it can be said that psychological maltreatment, psychological adjustment and family communication can affect the mental wellbeing of individuals.

There are several implications of this research. The first is that it is a negative reflection of the psychological maltreatment that individuals have experienced, in the present, and in the future (Satici & Okur, 2022). Considering that this situation can reduce wellbeing, it was considered important to conduct this study. Second, psychological maltreatment can negatively affect individuals' family life as well as their individual life. Considering the fact that individuals who experienced psychological maltreatment during the childhood could have adjustment and communication problems with their families in the adulthood, this study can be argued to be significant. Third, it has been reported that those with high psychological adjustment have stronger family relationship (Estévez et al., 2005; Görgün-Baran, 2004). According to another different study, a strong psychological adjustment of individuals supports a healthy relationship between family members (Kalyencioğlu & Kutlu, 2010; Sznitman et al., 2019). The findings of these studies demonstrate that psychological adjustment is a factor that strengthens the family. A healthy family relationship that emerges as a result of high psychological adjustment can also strengthen family communication. Therefore, it is important to carry out this research. Finally, the lack of research into the analysis of psychological maltreatment, psychological adjustment, family communication and mental wellbeing together necessitated the present study. In addition, in this study the examination of these variables through the longitudinal serial analysis is particularly important as it reveals the causality link between these variables more clearly. Thanks to this longitudinal research, healthier informa-

tion can be obtained about the determinants of individuals' mental well-being. In this context, answers to the following research questions (RQ) were sought:

RQ1. Is there a longitudinal mediating effect of psychological adjustment on the relationship between psychological maltreatment and mental wellbeing?

RQ2. Is there a longitudinal mediating effect of family communication on the relationship between psychological maltreatment and mental wellbeing?

RQ3. Are there a longitudinal serial mediating effect of psychological adjustment and family communication on the relationship between psychological maltreatment and mental wellbeing?

Methods

Participant and Procedure

We conducted a two-wave longitudinal design with three months between each wave. The current study was developed in accordance with the Helsinki Declaration and approved by

Artvin Çoruh University Scientific Research and Ethical Review Board (Reference Number: E-18457941-050.99-54381). After signing informed consent forms, participants filled out the measures for around 15 min. A total of 321 participant completed the first wave. Two-hundred and ninety-seven participant included at second wave. After matching participants, the final sample consist of 285 [183 (64.32) females and 102 (35.8%) males] Turkish adults. On average, these participants were 29.60 years of age ($SD=8.80$), ranging from 19 to 63 years old.

Measures

Warwick-Edinburgh Mental Wellbeing Scale

Tennant et al., (2007) developed this scale to measure participants' levels of wellbeing. First, Keldal (2015) adapted the scale into Turkish. Then, Demirtaş & Baytemir (2019) developed the adapted 14-item scale's seven-item short version. Consisting of one dimension, the scale is scored in a 5-point scale. A high score on the scale, which ranges from 7 to 35, indicates that the individuals' mental wellbeing is strong. The validity analysis findings revealed that the scale had adequate fit indices ($\chi^2/df=1.98$, $CFI=0.99$, $NFI=0.97$, $GFI=0.97$, $AGFI=0.94$, $RMSEA=0.062$, $SRMR=0.033$). As determined by the scale's reliability analysis, the Cronbach alpha is 0.86.

Psychological Maltreatment Questionnaire–Short Form

This 12-item scale was developed by Arslan (2015) to evaluate childhood experiences of psychological maltreatment. The scale's items are scored on a one-to-four scale (1=Never; 4=Always). A score between 12 and 48 is taken from the scale.

After positive items are reversed, high scores indicate a high level of psychological maltreatment behavior. As a result of the analyses, it has been reported that the scale is valid ($\chi^2/df=3.53$, CFI=0.97, NFI=0.97, GFI=0.85, IFI=0.97, RFI=0.95, RMSEA=0.076, SRMR=0.053). In addition, the Cronbach alpha of the scale was calculated as 0.95.

Brief Psychological Adjustment Scale

Cruz et al., (2020) developed this scale to assess individuals' psychological adjustment. This short self-report scale is one-dimensional and consists of six items. It has been adapted into Turkish by Yıldırım & Solmaz (2021). Items in the scale evaluate how individuals felt in the previous week. The scale, which is scored on a 7-point scale, yields a value between 6 and 42. High scores indicate more problems with psychological adjustment. The scale showed acceptable fit indices, according to the validity analysis' findings ($\chi^2/df=2.46$, CFI=0.97, NNFI=0.95, RMSEA=0.10, SRMR=0.04). The Cronbach's alpha of the scale's has been reported as 0.88.

Family Communication Scale

This scale of Geçer & Yıldırım (2021) aims to measure family communication. This one-dimensional scale has six items. This scale does not contain any reversed item, and one can use it to get the overall score. The total score on a 4-point scale with 1 meaning strongly disagree and 4 being strongly agree can range from 6 to 24. High scores indicate that participants' families communicate effectively. The findings of the validity test indicated that the scale had adequate fit indices ($\chi^2=50.36$, $df=8$, CFI=0.97, NFI=0.97, TLI=0.95, IFI=0.95, RMSEA=0.09, SRMR=0.036). As a result of the reliability analysis, the Cronbach alpha of the scale was found to be 0.82.

Data Analysis

Data were analyzed using IBM SPSS Statistics version 23 and AMOS version 22. Skewness (*Sk*) and kurtosis (*Ku*) values were analyzed to test normality assumption. Pearson's correlation coefficients were used to examine correlations between variables.

Structural equation modelling (SEM) was performed to whether psychological adjustment and family communication longitudinally and serially mediated the relationship between psychological maltreatment and mental wellbeing. In the mediation model, psychological maltreatment is the independent variable. Psychological adjustment and family communication are the serial mediators. Mental wellbeing is an outcome variables. Gender and age were controlled as covariates. The indices that measured the model's goodness of fit included the ratio of χ^2 to the degree of freedom, comparative fit index (CFI), Tucker-Lewis index (TLI), normed fit index (NFI), incremental fit index (IFI), goodness of fit (GFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). Lastly, the longitudinal mediation model was also examined by bootstrapping using 5,000 bootstrap samples.

Results

The mean, standard deviations, skewness, kurtosis and reliabilities of measures are shown in Table 1. Table 1 also shows significant correlations between psychological maltreatment, mental wellbeing, psychological adjustment, and family communication. Psychological maltreatment at T1-2 was negatively associated with mental wellbeing at T1-2, psychological adjustment at T1-2, and family communication at T1-2 significantly. Mental wellbeing at T1-2 was significantly positively correlated with psychological adjustment at T1-2 and family communication at T1-2.

Structural Equation Modeling

First, three different measurement models were tested. The measurement model of first waves fit data well: $\chi^2=87.31$, $df=29$, $\chi^2/df=3.01$, CFI=0.970, TLI=0.953, NFI=0.956, IFI=0.970, GFI=0.938, RMSEA=0.080, SRMR=0.045. The measurement model of second waves had also acceptable fit, $\chi^2=78.86$, $df=29$, $\chi^2/df=2.71$, CFI=0.975, TLI=0.961, NFI=0.961, IFI=0.975, GFI=0.946, RMSEA=0.078, SRMR=0.037. After the confirmation of the measurement model, the longitudinal structural model was examined.

Longitudinal structural model was based on study hypotheses to examine whether psychological adjustment and family communication play the role in longitudinal serial mediating the effect of psychological maltreatment on mental wellbeing controlling for the role of gender, age, and measures at baseline. As shown in Fig. 1, the model fit of the longitudinal serial mediation model was acceptable: $\chi^2=101.36$, $df=45$, $\chi^2/df=2.25$, CFI=0.972, TLI=0.958, NFI=0.951, IFI=0.972, GFI=0.946, RMSEA=0.066, SRMR=0.035.

Psychological maltreatment had a significantly negative effect on psychological adjustment and family communication. In addition, psychological adjustment and family communication had significant effects on mental wellbeing.

Next, bootstrapping were conducted to investigate the indirect effects (see Table 2). The indirect effects of T2 psychological adjustment ($\beta = -0.086$, bootstrapping CI = [-0.154, -0.026]) and T2 family communication ($\beta = -0.164$, bootstrapping CI = [-0.239, -0.094]) were significant, suggesting that both variables could separately mediate the relationship between T1 psychological maltreatment and T2 mental wellbeing. In addition, the mediating pathway of T1 psychological maltreatment \rightarrow T2 psychological adjustment \rightarrow T2 family communication \rightarrow T2 mental wellbeing was also significant ($\beta = -0.011$, bootstrapping CI = [-0.025, -0.004]), supporting a serial mediation relationship.

Note. CI confidence interval; LL lower limit; UL upper limit.

Discussion

Psychological maltreatment has a negative reflection on the mental health of children who are regarded as unwanted and unappreciated by their parents. As a result of the adverse impact of psychological maltreatment on mental health, family problems also

Table 1 Descriptive statistics and reliabilities for the study variables

Variable	Descriptive Statistics and Reliabilities					Correlations								
	Mean	SD	Skewness	Kurtosis	α	ω	λ_6	1	2	3	4	5	6	7
1. Psychological maltreatment T1	40.04	9.98	1.160	0.832	0.809	0.841	0.894	–						
2. Psychological maltreatment T2	40.52	10.02	1.103	0.997	0.917	0.932	0.932	0.76**	–					
3. Mental wellbeing T1	26.30	4.68	-0.262	-0.009	0.868	0.873	0.865	-0.29**	-0.29**	–				
4. Mental wellbeing T2	26.04	4.61	-0.551	0.712	0.872	0.877	0.863	-0.26**	-0.38**	0.69**	–			
5. Psychological adjustment T1	25.96	10.02	-0.126	-0.992	0.929	0.931	0.926	-0.20**	-0.22**	0.62**	0.46**	–		
6. Psychological adjustment T2	26.55	9.96	-0.194	-1.098	0.943	0.944	0.926	-0.14*	-0.27**	0.41**	0.59**	0.51**	–	
7. Family communication T1	19.11	3.41	-0.759	0.772	0.868	0.884	0.858	-0.62**	-0.56**	0.47**	0.37**	0.38**	0.25**	–
8. Family communication T2	18.86	3.48	-0.660	0.469	0.882	0.898	0.869	-0.50**	-0.64**	0.41**	0.45**	0.33**	0.34**	0.69**

Note. * $p < .05$, ** $p < .001$

emerge. Individuals' family relations weaken significantly because of psychological maltreatment, and so family communication, and family harmony is impaired. In this regard, a longitudinal design was used to study the links that influence an individual's mental wellbeing. In this study, the longitudinal mediating roles of psychological adjustment and family communication in the relationship between psychological maltreatment and mental wellbeing were examined. The longitudinal serial mediation study revealed that psychological adjustment and family communication have a serial mediating role in the link between psychological maltreatment and mental wellbeing. The research findings are discussed in detail below.

The study's initial finding is that psychological adjustment mediates the relationship between psychological maltreatment and mental wellbeing (RQ1). The ability to deal with life's problems (Bender et al., 2019) and individuals' satisfaction with one's life (Chambers et al., 2017) are two of psychological adjustment's main traits. In this context, psychological adjustment is weakened by the decline in life satisfaction in those who have exposed psychological maltreatment. Apart from this, the fact that individuals who are psychological maltreatment begin to lose their ability to cope with difficulties in life also reduces psychological adjustment. This research's finding is in line with previous studies results in the literature (e.g., Higgins & McCabe 2003; Sesar et al., 2008). These studies aforementioned reveal that psychological maltreatment has a negative effect on psychological adjustment. Psychological maltreatment was reported as one of the indicators of psychological adjustment in a recent study by Arslan (2022).

Psychological adjustment, which is reduced by the effect of psychological maltreatment, also reflects positively on the mental wellbeing of individuals. Amid the characteristics of psychological adjustment are a positive functional structure, an enjoying life, and less mental health problems. In this framework, psychological adjustment predicts the mental wellbeing of individuals. It has been stated in the literature that adjustment is one of the significant indicators of mental health (Yıldırım & Solmaz, 2021). It was determined that the results of other studies supported the findings of this study. For instance, in the study conducted by Zheng et al., (2004), people with good levels of psychological adjustment were reported to have a healthy state of mental wellbeing. Furthermore, a study conducted by Bantjes & Kagee (2018) indicated a significant correlation between psychological adjustment and mental wellbeing. All of these studies demonstrate that people who have been exposed to psychological maltreatment should participate in activities to improve psychological adjustment, which will indirectly improve their mental wellbeing.

Another finding of the research is that the relationship between psychological maltreatment and mental wellbeing is mediating by family communication (RQ2). Psychological maltreatment causes individuals to experience both conflict (Herrenkohl et al., 2012) and avoidance behavior in their interpersonal relationships (Paul & Eckenrode, 2015). Therefore, when people are exposed psychological maltreatment by their families, family communication suffers. In this study, it was found that psychological maltreatment predicted family communication. This finding is in parallel with the results of previous research (e.g., Burgess & Conger 1978; Paavilainen et al., 2001). In these aforementioned studies, it was determined that the family communi-

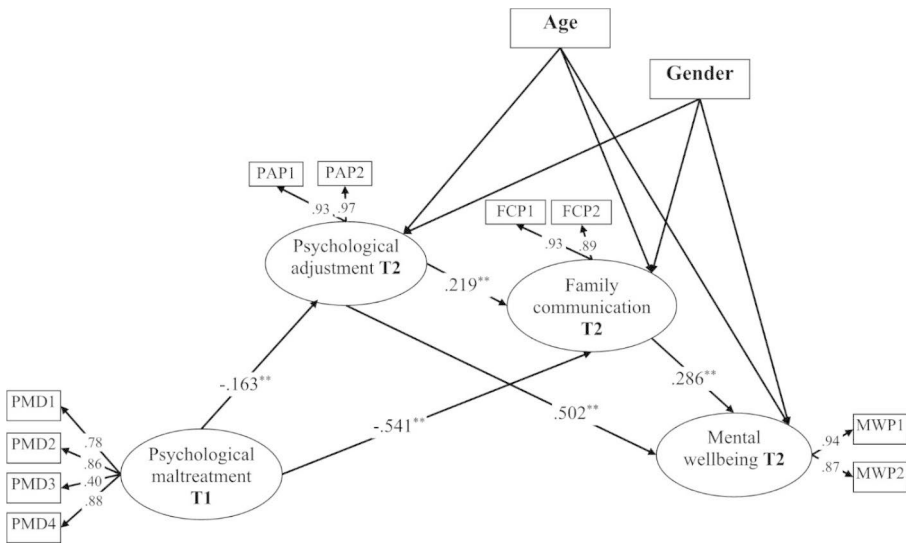


Fig. 1 Structural equation modeling for the longitudinal serial mediation model. (Note. ** $p < .01$, *PMD*: sub-dimension of psychological maltreatment, *PAP*: parcel of psychological adjustment, *FCP*: parcel of family communication, *MWP*: parcel of mental wellbeing)

Table 2 Indirect Effect of Longitudinal Serial Mediation Model

Path	Coefficient	95%CI	
		LL	UL
Psychological maltreatment T1 ◇ Psychological adjustment T2 ◇ Mental well-being T2	-0.086	-0.154	-0.026
Psychological maltreatment T1 ◇ Family communication T2 ◇ Mental well-being T2	-0.164	-0.239	-0.094
Psychological maltreatment T1 ◇ Psychological adjustment T2 ◇ Family communication T2 ◇ Mental well-being T2	-0.011	-0.025	-0.004

cation of people who were exposed to psychological maltreatment by their parents was broken.

Weakening of family communication due to psychological maltreatment affects both individual wellbeing (Fa'alau & Jensen, 2006) and family wellbeing (Wong et al., 2022). Family communication was detected to be one of the indicators of mental wellbeing in this study. This result is supported by the research of Bacigalupe & Bräuninger (2017). According to the study cited above, there is a significant relationship between family communication and mental wellbeing. The inability of the family members to communicate in a healthy way causes the problems to continue and the relations to worsen (Taipale, 2019), so this situation negatively affects mental wellbeing. Based on the results of these research, it can be said that people who have experienced psychological maltreatment from their families need to strengthen their

family communication and relation abilities. Thus, individuals' personal wellbeing and family wellbeing can both increase.

The main finding obtained in line with the study's aim is that psychological adjustment and family communication have a longitudinal serial mediation role in the relationship between psychological maltreatment and mental wellbeing (RQ3). Family communication was adversely affected along with the effect of psychological maltreatment on psychological adjustment. The decrease in psychological adjustment due to the problems experienced by individuals in the family weakens family relations and causes a lack of communication, especially between parents and children. This finding is in line with those of previous research reported in the literature (e.g., den Heijer et al., 2011; Yoon, 2000). This research cited above revealed that there are significant relationships between family communication and psychological adjustment. The importance of psychological adjustment in individuals experiencing strong family communication was noted in a recent study by Herrero et al., (2020). As previously mentioned, poor family communication has an effect on people's mental wellbeing. In conclusion, the findings of this study show that psychological maltreatment, psychological adjustment, and family communication are indicators of mental wellbeing.

Implications

In this study, it was revealed that psychological maltreatment suffered in childhood has an enduring negative impact on an individual's life as an adult. In addition, psychological maltreatment weakens people's ability to communicate with their family and live in harmony with their environment, both of which have a negative effect on an individual's mental wellbeing. This finding demonstrates the importance of childhood life and the need for parents to be sensitive while forging relationships with their children. In the study of Genç and Arslan (2022), it was stated that psychological maltreatment experienced in childhood increases tendency of negative behavior in adulthood. Therefore, it's important for parents and other adults to be more sensitive to their children, and people shouldn't forget that their actions can also affect the family they will have in the future. It can be expected that the quality of relationships, adjustment and family wellbeing in the family established in adulthood by individuals who have been psychological maltreatment in childhood will be negative. In summary, childhood life has an effect on both happiness of individual and family. Finally, the use of the longitudinal serial mediation in this study provided for a clearer presentation of the factors that influence mental wellbeing as well as a great understanding of the links between the variables.

Limitations and Future Research

The study's findings and important implications should be examined within the scope of some limitations. The utilization of self-report scales for data collection is the study's first limitation. In future research, different data collection methods can be tested. The second limitation is that the research data was collected and analyzed throughout the process of two measurements three months apart. Future research can

study the cause-and-effect relationship between these factors by taking more frequent and longer-term measurements. The third limitation is that despite the fact that the data were collected from voluntary participants, biased responses could be given by making the mistake of social desirability. Therefore, in future studies, social desirability error should be precautions against. One of these precautions is the use of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964), among other measurement tools. Finally, it is predicted that the development of intervention programs to counteract the damaging effects of psychological maltreatment would improve people's wellbeing in subsequent studies.

Conclusion

As a result, psychological adjustment and family communication have a longitudinal mediation role in this study's findings regarding the link between psychological maltreatment and mental wellbeing. It is crucial to safeguard individuals against psychological maltreatment, especially when they are in childhood. However, when this is not possible and individuals are exposed to psychological maltreatment, psycho-educational programs can increase individuals' psychological adjustment and family communication skills. It is believed that carrying out such activities will benefit people's mental wellbeing.

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Data Availability Data will be available on request.

Declarations

Conflict of Interest No conflict of interest exists for this manuscript for any of the authors.

Ethical Approval The study protocol has been approved by the Human Research Ethics Committee of Artvin Coruh University. The study was performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its following updates.

Consent to Participate Informed consent was obtained from all the individual participants that were included in the study.

Pre-Registration Statement This study was not pre-registered.

References

- American Professional Society on the Abuse of Children (2019). *The Investigation and determination of suspected psychological maltreatment in children and adolescents*. <https://www.apsac.org/guidelines>. Accessed 29 October 2022.
- Arslan, G. (2015). Development Psychological Maltreatment Questionnaire (PMQ): investigating psychometric properties in adolescents. *Bartın University Journal of Faculty of Education*, 4(2), 727–738.

- Arslan, G. (2022). Childhood psychological maltreatment, optimism, aversion to happiness, and psychological adjustment among college students. *Current Psychology*. Advance online publication. <https://doi.org/10.1007/s12144-022-03538-5>
- Arslan, G., & Genç, E. (2022). Psychological maltreatment and college student mental wellbeing: a uni and multi-dimensional effect of positive perception. *Children and Youth Services Review*, *134*, 106371. <https://doi.org/10.1016/j.childyouth.2022.106371>. Advance online publication.
- Bacigalupe, G., & Bräuninger, I. (2017). Emerging technologies and family communication: the case of international students. *Contemporary Family Therapy*, *39*, 289–300. <https://doi.org/10.1007/s10591-017-9437-7>.
- Bantjes, J., & Kagee, A. (2018). Common mental disorders and psychological adjustment among individuals seeking HIV testing: a study protocol to explore implications for mental health care systems. *International Journal of Mental Health Systems*, *12*(16), 1–10. <https://doi.org/10.1186/s13033-018-0196-0>.
- Bender, M., van Osch, Y., Slegers, W., & Ye, M. (2019). Social support benefits psychological adjustment of international students: evidence from a meta-analysis. *Journal of Cross-Cultural Psychology*, *50*(7), 827–847. <https://doi.org/10.1177/0022022119861151>.
- Burgess, R., & Conger, R. (1978). Family interaction in abusive, neglectful and normal families. *Child Development*, *49*(4), 1163–1173.
- Chambers, S. K., Ng, S. K., Baade, P., Aitken, J. F., Hyde, M. K., Wittert, G., Frydenberg, M., & Dunn, J. (2017). Trajectories of quality of life, life satisfaction, and psychological adjustment after prostate cancer. *Psycho-Oncology*, *26*(10), 1576–1585. <https://doi.org/10.1002/pon.4342>.
- Chen, Q., Wang, X. Q., He, X. W., Ji, L. J., Liu, M. F., & Ye, B. J. (2021). The relationship between search for meaning in life and symptoms of depression and anxiety: key roles of the presence of meaning in life and life events among chinese adolescents. *Journal of Affective Disorders*, *282*, 545–555. <https://doi.org/10.1016/j.jad.2020.12.156>.
- Child Welfare Information Gateway (2022). *Definitions of child abuse & neglect*. <https://www.childwelfare.gov/topics/can/defining/>
- Cicchetti, D., Rogosch, F. A., Lynch, M., & Holt, K. D. (1993). Resilience in maltreated children: processes leading to adaptive outcome. *Development and Psychopathology*, *5*(4), 629–647. <https://doi.org/10.1017/S0954579400006209>.
- Cooke, J. E., Racine, N., Plamondon, A., Tough, S., & Madigan, S. (2019). Maternal adverse childhood experiences, attachment style, and mental health: pathways of transmission to child behavior problems. *Child Abuse & Neglect*, *93*, 27–37. <https://doi.org/10.1016/j.chiabu.2019.04.011>.
- Crowne, D. P., & Marlowe, D. (1964). *The approval motive: studies in evaluative dependence*. Wiley.
- Cruz, R. A., Peterson, A. P., Fagan, C., Black, W., & Cooper, L. (2020). Evaluation of the brief Adjustment Scale-6 (BASE-6): a measure of general psychological adjustment for measurement-based care. *Psychological Services*, *17*(3), 332–342. <https://doi.org/10.1037/ser0000366>.
- den Heijer, M., Seynaeve, C., Vanheusden, K., Duijvenvoorden, H. J., Bartels, C. C., Menke-Pluymers, M. B., & Tibben, A. (2011). Psychological distress in women at risk for hereditary breast cancer: the role of family communication and perceived social support. *Psycho-oncology*, *20*(12), 1317–1323. <https://doi.org/10.1002/pon.1850>
- Demirtaş, A., & Baytemir, K. (2019). Adaptation of Warwick-Edinburgh Mental Well-being scale short form into Turkish: validity and reliability study. *Electronic Journal of Social Sciences*, *18*(70), 654–666 <https://doi.org/10.17755/esosder.432708>
- Estévez, L. E., Musitu, O. G., & Herrero, O. J. (2005). El rol de la comunicación familiar y del ajuste escolar en la salud mental del adolescente. *Salud Mental*, *28*(4), 81–89.
- Fa'alau, F., & Jensen, V. (2006). Samoan youth and family relationships in Aotearoa New Zealand. *Pacific Health Dialog*, *13*(2), 17–24.
- Gaudin, J. M., Polansky, N. A., Kilpatrick, A. C., & Shilton, P. (1996). Family functioning in neglectful families. *Child Abuse & Neglect*, *20*(4), 363–377. [https://doi.org/10.1016/0145-2134\(96\)00005-1](https://doi.org/10.1016/0145-2134(96)00005-1).
- Geçer, E., & Yıldırım, M. (2021). Family communication and psychological distress in the era of Covid-19 pandemic: mediating role of coping. *Journal of Family Issues*. <https://doi.org/10.1177/0192513X211044489>. Advance online publication.
- Genç, E., & Arslan, G. (2022). Parents' childhood psychological maltreatment and youth mental health: exploring the role of attachment styles. *Current Psychology Advance online publication*. <https://doi.org/10.1007/s12144-022-03765-w>.
- Görgün Baran, A. (2004). A model essay on family communication and relationships within in Turkey. *Hacettepe University Institute of Turkish Studies*, *1*, 31–42.

- Harper, F. W. K., & Arias, I. (2004). The role of shame in predicting adult anger and depressive symptoms among victims of child psychological maltreatment. *Journal of Family Violence, 19*, 359–367. <https://doi.org/10.1007/s10896-004-0681-x>.
- Hart, S. N., & Glasser, D. (2011). Psychological maltreatment—maltreatment of the mind: a catalyst for advancing child protection toward proactive primary prevention and promotion of personal well-being. *Child Abuse and Neglect, 35*(10), 758–766. <https://doi.org/10.1016/j.chiabu.2011.06.002>.
- Hart, S. N., Brassard, M. R., & Wernham, M. (2022). Psychological maltreatment: a threat to children not to be ignored. In R. D. Krugman & J. E. Korbin (Eds.), *Handbook of child maltreatment* Springer. https://doi.org/10.1007/978-3-030-82479-2_4
- Herrenkohl, T. I., Klika, J. B., Herrenkohl, R. C., Russo, M. J., & Dee, T. (2012). A prospective investigation of the relationship between child maltreatment and indicators of adult psychological well-being. *Violence and Victims, 27*(5), 764–776. <https://doi.org/10.1891/0886-6708.27.5.764>.
- Herrero, M., Martínez-Pampliega, A., & Alvarez, I. (2020). Family communication, adaptation to divorce and children's maladjustment: the moderating role of coparenting. *Journal of Family Communication, 20*(2), 114–128. <https://doi.org/10.1080/15267431.2020.1723592>.
- Higgins, D. J., & McCabe, M. P. (2000). Multi-type maltreatment and the long-term adjustment of adults. *Child Abuse Review, 9*(1), 6–18. [https://doi.org/10.1002/\(SICI\)1099-0852\(200001/02\)9:1<6::AID-CAR579>3.0.CO;2-W](https://doi.org/10.1002/(SICI)1099-0852(200001/02)9:1<6::AID-CAR579>3.0.CO;2-W).
- Higgins, D. J., & McCabe, M. P. (2003). Maltreatment and family dysfunction in childhood and the subsequent adjustment of children and adults. *Journal of Family Violence, 18*, 107–120. <https://doi.org/10.1023/A:1022841215113>.
- Jaffee, S. R. (2017). Child maltreatment and risk for psychopathology in childhood and adulthood. *Annual Review of Clinical Psychology, 13*(1), 525–551. <https://doi.org/10.1146/annurev-clinpsy-032816-045005>.
- Kalyencioglu, D., & Kutlu, Y. (2010). The adjustment level according to family function perceptions of adolescents. *Florence Nightingale Journal of Nursing, 18*(2), 56–62.
- Kaufmann, M., Goetz, T., Lipnevich, A. A., & Pekrun, R. (2019). Do positive illusions of control foster happiness? *Emotion, 19*(6), 1014–1022. <https://doi.org/10.1037/emo0000499>.
- Kaya, İ., & Çeçen-Eroglu, A. R. (2013). The role of family functions as the predictors of childhood abuse experiences among adolescents. *Education and Science, 38*(168), 386–397.
- Keldal, G. (2015). Turkish version of the Warwick-Edinburgh Mental Well-Being scale: a validity and reliability study. *Journal of Happiness & Well-Being, 3*(1), 103–115.
- Kılınç, M., Arslan, G., Çakar, F. S., & Yıldırım, M. (2022). Psychological maltreatment, coping flexibility, and death obsession during the COVID-19 pandemic: a multi-mediation analysis. *Current Psychology, 1–9*. <https://doi.org/10.1007/s12144-021-02576-9>. Advance online publication.
- Meyerson, L. A., Long, P. J., Miranda, R. Jr., & Marx, B. P. (2002). The influence of childhood sexual abuse, physical abuse, family environment, and gender on the psychological adjustment of adolescents. *Child Abuse & Neglect, 26*(4), 387–405. [https://doi.org/10.1016/s0145-2134\(02\)00315-0](https://doi.org/10.1016/s0145-2134(02)00315-0).
- Orsi, R., Brown, S. M., Knight, K. E., & Shillington, A. M. (2018). Remaining home: well-being outcomes and co-occurring parental substance use following a maltreatment investigation in middle childhood. *Children and Youth Services Review, 84*, 118–124. <https://doi.org/10.1016/j.childyouth.2017.11.022>.
- Paavilainen, E., Astedt-Kurki, P., Pauonen-Ilmonen, M., & Laippala, P. (2001). Risk factors of child maltreatment within the family: towards a knowledgeable base of family nursing. *International Journal of Nursing Studies, 38*, 297–303. [https://doi.org/10.1016/s0020-7489\(00\)00074-2](https://doi.org/10.1016/s0020-7489(00)00074-2).
- Paul, E., & Eckenrode, J. (2015). Childhood psychological maltreatment subtypes and adolescent depressive symptoms. *Child Abuse and Neglect, 47*, 38–47. <https://doi.org/10.1016/j.chiabu.2015.05.018>.
- Satici, S. A., & Okur, S. (2022). Investigating the link between psychological maltreatment, shyness, hope, and wellbeing. *Personality and Individual Differences, 196*, 111764. <https://doi.org/10.1016/j.paid.2022.111764>. Advance online publication.
- Seaton, E. K. (2009). Perceived racial discrimination and racial identity profiles among african american adolescents. *Cultural Diversity and Ethnic Minority Psychology, 15*(2), 137–144. <https://doi.org/10.1037/a0015506>.
- Segrin, C., & Flora, J. (2005). *Family communication*. Routledge.
- Sesar, K., Zivčić-Bećirević, I., & Sesar, D. (2008). Multi-type maltreatment in childhood and psychological adjustment in adolescence: questionnaire study among adolescents in Western Herzegovina Canton. *Croatian Medical Journal, 49*(2), 243–256. <https://doi.org/10.3325/cmj.2008.2.243>.

- Stoltenborgh, M., Bakermans-Kranenburg, M. J., Alink, L. R. A., & van IJzendoorn, M. H. (2015). The prevalence of child maltreatment across the globe: review of a series of meta-analyses. *Child Abuse Review*, 24, 37–50. <https://doi.org/10.1002/car.2353>.
- Sznitman, G. A., Zimmermann, G., & Van Petegem, S. (2019). Further insight into adolescent personal identity statuses: differences based on self-esteem, family climate, and family communication. *Journal of Adolescence*, 71, 99–109. <https://doi.org/10.1016/j.adolescence.2019.01.003>.
- Taipale, S. (2019). *Intergenerational connections in digital families*. Springer.
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes*, 5(1), 63. <https://doi.org/10.1186/1477-7525-5-63>.
- Watts, J. R., Lazzareschi, N. R., Liu, Y., & O'Sullivan, D. (2022). Childhood psychological maltreatment, sense of self, and PTSD symptoms in emerging adulthood. *Journal of Counseling & Development*, 1–10. <https://doi.org/10.1002/jcad.12455>.
- Wong, M. M. C., Ma, J. L. C., Wan, P. S., Xia, L. L., & Fok, M. H. T. (2022). The development and validation of a family Wellbeing Index for Hong Kong Chinese families. *Journal of Child and Family Studies*, 31, 1683–1697. <https://doi.org/10.1007/s10826-022-02281-6>.
- World Health Organization (2020). *Child maltreatment*. <https://www.who.int/news-room/fact-sheets/detail/child-maltreatment>. Accessed 27 October 2022.
- Yıldırım, M., & Solmaz, F. (2021). Testing a turkish adaption of the brief Psychological Adjustment Scale and assessing the relation to mental health. *Studies in Psychology*, 41(1), 231–245. <https://doi.org/10.26650/SP2020-0032>.
- Yoon, D. P. (2000). Causal modeling predicting psychological adjustment of korean-born adolescent adoptees. *Journal of Human Behavior in the Social Environment*, 3(3–4), 65–82. https://doi.org/10.1300/J137v03n03_06.
- Zheng, X., Sang, D., & Wang, L. (2004). Acculturation and subjective well-being of chinese students in Australia. *Journal of Happiness Studies*, 5, 57–72. <https://doi.org/10.1023/B:J OHS.0000021836.43694.02>.

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