


A Meta-Analysis of the Correlation Between Posttraumatic Growth and Social Support in Türkiye Sample

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Abstract

There are inconsistent findings in studies examining the relationship between posttraumatic growth and social support. This meta-analysis aims to evaluate the relationship between posttraumatic growth and social support. For this purpose, a systematic search was conducted in four databases including the Web of Science (WoS), TR Index, ULAKBIM, and National Thesis Center. Studies with correlational findings on the relationship between posttraumatic growth and social support were included in the study. A total of 45 studies with a total sample size of 7704 people were included in the meta-analysis. According to the random effects model, the effect size of 45 studies was $r = .37$. According to the meta-analysis findings, a moderate positive relationship was found between posttraumatic growth and social support. Research findings showed that individuals with high levels of posttraumatic growth also had high levels of social support. Considering the results of this meta-analysis, attention should be paid to social support in terms of protective mental health in mental health studies.

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INTRODUCTION

Although studies on stress and trauma mostly focus on the negative consequences of stress and traumatic experiences, in recent years, there has been increasing research showing that individuals may experience growth and development in the face of negative experiences. Individuals' growth and development experiences are called posttraumatic growth. The concept of posttraumatic growth refers to the positive psychological change that occurs because of struggling with challenging life conditions (Calhoun & Tedeschi, 1999). Posttraumatic growth refers to the rise of individuals from their current position to a better level of functionality beyond getting rid of a stressor (Dolbier, Jaggars & Steinhardt, 2010).

The experience of growth emphasizes a process that expresses the process of individuals creating resilience, wisdom, and meaning in the face of these difficulties, not the disappearance of ongoing troubles (Shakespeare-Finch, Martinek, Tedeschi & Calhoun, 2013). Tedeschi and Calhoun (2004) state that growth does not occur as a direct result of the stressful event but emerges through cognitive processing and restructuring that individuals perform in the face of difficult experiences. Growth occurs when the stressful event leads to new configurations regarding the individual's needs and individuals adapt positively to this process (Joseph & Linley, 2005). Schaefer and Moss (1992) state that stressful life events contribute to the increase in individuals' personal and social resources and new coping skills. The positive changes that occur in this direction are discussed under the titles of greater appreciation of life, increased personal power, awareness of new possibilities, spiritual development, and improved social relations (Tedeschi & Calhoun, 1996).

Personal and social resources can be considered important variables in the experiences of people because of stressful events. Therefore, it is assumed that the outcomes of stressful encounters are influenced by many factors, including personality, worldviews, social support, socioeconomic status, pre-existing physical and psychological adaptation, and previous experiences (Park, 1998). Social support, one of these elements, refers to interpersonal interactions in which individuals, families, and groups help each other. Although it may not seem to be part of the main concepts related to stress, crisis, and trauma, social support is central to many stress, crisis, and trauma theories and related studies (Berger, 2015). Individuals who experience significant life events receive support from sources of social support such as family members or friends (Woods, Sciarini & Johanson, 2001).

Individuals facing stressful circumstances are more likely to experience growth if they have relatively strong social resources (Park, 1998; Tedeschi & Calhoun, 2004). This is because social resources act as a buffer against both social stressors and psychological stress (Lin & Ensel, 1989). In addition, factors such as social support facilitate growth by enabling individuals to make sense of life, connect with others, and find new paths (Hijazi, Keith, & O'Brien, 2015). A person's sources of social support can serve to increase their power capacities and increase their belief in their ability to cope with or manage stress. Social support resources not only promote well-being but also develop personal resources such as empathy, wisdom, courage, and resilience (Niemic, 2019).

Social support can help to redefine the perception of the potential harm of a situation and prevent a situation from being judged as highly stressful. Stressful processes with social support can lead to better health outcomes for individuals (Yeung & Lu, 2018). In addition, with social support, development and recovery after trauma is accelerated; in the absence of social support, symptoms last longer, the potential for chronic and severe depression increases, and the duration of quality-of-life decreases (Çelik, 2019). The findings support the idea that having social resources in the face of stressors plays a role in protecting psychological health and creates the potential for a general, adaptation-oriented framework for adaptation under both high and low stressors (Holahan & Moos, 1991). Indeed, research findings showing that social support is associated with posttraumatic growth (Calhoun & Tedeschi, 1990; Leung et al., 2010; Yeung & Lu, 2018; Yu et al., 2014; Zhou, Wu & Zhen, 2017) suggest that social support is an important factor in the emergence of growth (Jia, Ying & Lin,

2017; Li, Cao, Cao, Wang & Cuia, 2012; Picoraro, Womer, Kazak & Feudtner, 2014). However, some studies have also found that there is no significant relationship between posttraumatic growth and social support or that they are negatively related (Dolbier et al., 2010; Metelerkamp, 2013; Schmidt et al., 2012; Teixeira & Pereira, 2013; Volgin & Bates, 2016). In addition, some studies show that growth is only associated with certain types of social support (Adsever, 2019). Considering the variability between these findings, it is thought that a meta-analysis study is necessary to clarify the relationship between posttraumatic growth and social support.

It is seen that the non-significant relationships between social support and posttraumatic growth are related to the way people receive social support and the resulting growth (Volgin & Bates, 2016); social support, which is among the environmental factors, has the power to explain positive or negative outcomes following trauma (Metelerkamp, 2013). Therefore, it is thought that variables related to social support processes beyond having social support resources and using social support resources may cause different results in the relationship between social support and posttraumatic growth.

Differences observed in posttraumatic growth may also be related to individual characteristics related to culture, religion, or social support systems (Gallaway, Millikan & Bell, 2011). It is crucial to consider cultural differences when addressing factors associated with posttraumatic growth. This is because the roles of social influences, including social support, may vary across cultures and cultural factors may even affect the likelihood of growth (Kilmer et al., 2014). The fact that it is relatively easier for individuals to seek and receive positive social support in Turkish culture, where strong family ties are prominent, may help a person to reevaluate a stressful event in a more positive way (Arıkan & Karancı, 2012). In this sense, it is thought that a meta-analysis study focusing on the relationship between posttraumatic growth and social support, especially focusing on individuals with certain cultural backgrounds, is necessary. There are several benefits of such a study. The first of these is that various studies in which individuals who have experienced different types of stress and trauma have different sample sizes. Combining these studies in a meta-analysis will increase the power of the studies and provide a clearer determination of the relationship between posttraumatic growth and social support. The second benefit of this meta-analysis would be to expand the scope of existing knowledge on the relationship between posttraumatic growth and social support with a more representative sample. Finally, this meta-analysis will help to identify an important variable that is associated with posttraumatic growth. In this way, it is thought to contribute to the literature on posttraumatic growth and to further clarify the variables associated with existing growth processes, especially in specific cultural contexts.

In other words, protective factors such as social support have been found to have a critical role in increasing the level of posttraumatic growth (Yu et al., 2014). It is important to reveal the relationship between social support, which can be considered a protective factor, and posttraumatic growth for individuals with culturally similar characteristics to understand the mechanisms associated with posttraumatic growth and to focus on these mechanisms in studies aimed at increasing growth. In this direction, the general purpose of this study is to reach a general conclusion by examining the relationship between social support and posttraumatic growth levels of individuals in Türkiye through a meta-analysis method. Within the scope of this general purpose, an answer to the question "Is there a significant relationship between posttraumatic growth and social support?" was sought. It is thought that this study will contribute to reaching a general conclusion by combining the findings obtained from different studies on the relationship between posttraumatic growth and social support in Türkiye under a single finding. Thus, it is thought that the findings of this study will be used in the planning and programming of mental health services offered to individuals.

METHOD

In this study, the meta-analysis method was used. Meta-analysis is a method that involves generalizing the findings obtained from quantitative research by combining them (Şen & Yıldırım, 2020). Accordingly, this study aims to reach a general conclusion about the effect size by combining the findings obtained from independent studies that reveal the relationship between posttraumatic growth and social support. In this direction, a meta-analysis of correlational studies on the relationship between posttraumatic growth and social support was conducted. While conducting the study, the steps specified in The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) were taken into consideration (Page et al., 2021).

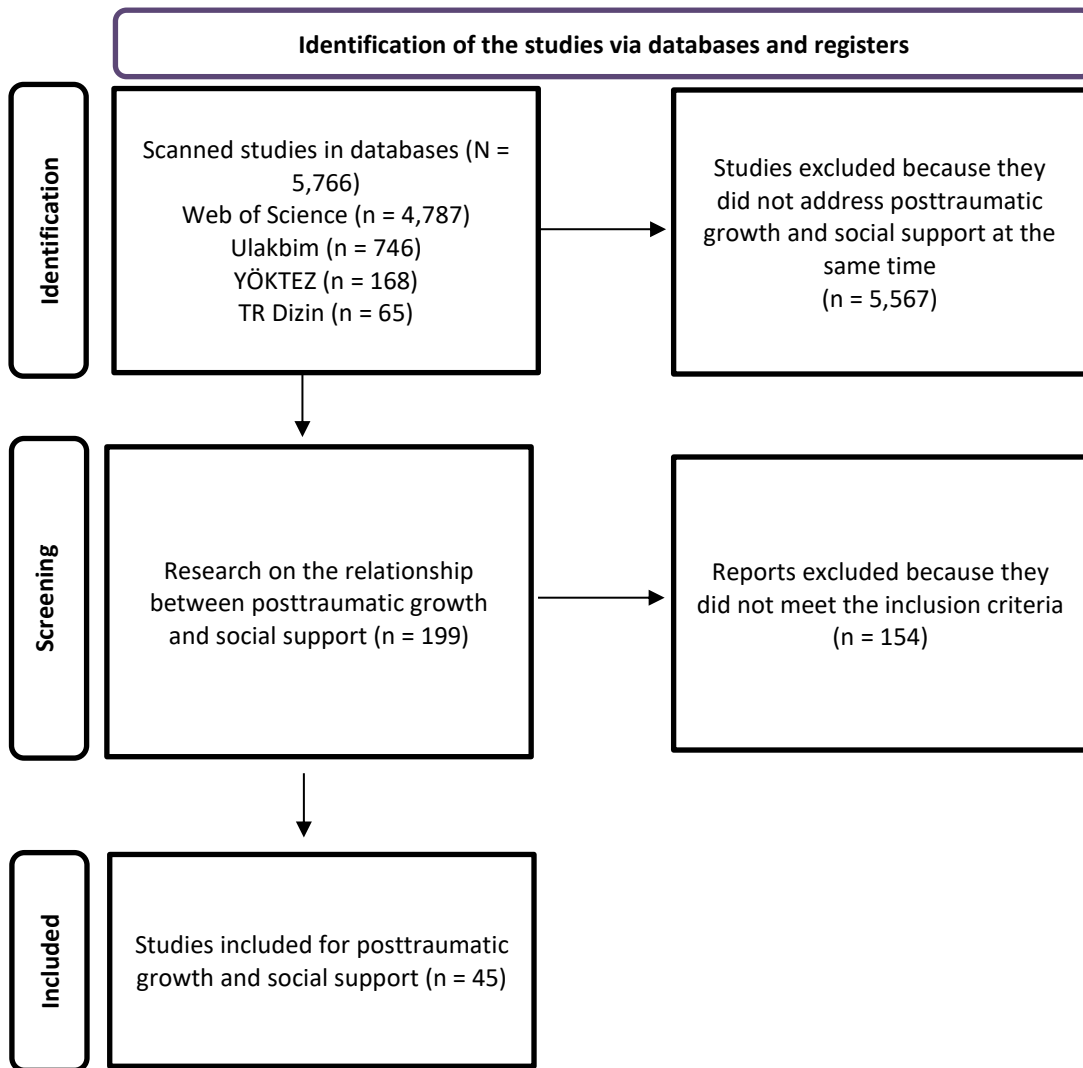
REVIEW OF STUDIES

Within the scope of this study, research articles and postgraduate theses conducted in Türkiye addressing the relationship between posttraumatic growth and social support were reviewed. To identify the studies on posttraumatic growth, Web of Science (WoS), TR Index, ULAKBIM, and National Thesis Center, which are the most widely used databases in Türkiye, were searched between November and December 2022. In the screening phase, databases were scanned using the keywords posttraumatic growth, and stress-related growth. Then, reviews, book chapters, and bibliographies of articles were manually searched to find studies that may have been overlooked. There are two measurement tools used in Turkey to measure Post Traumatic Growth. One of them was developed by Tedeschi & Calhoun (1996); It is the Growth After Trauma Inventory adapted to Turkish by Kağan, Güleç, Boysan and Çavuş (2012). This measurement tool consists of 21 items and 5 sub-dimensions. High scores from the scale indicate that the positive changes caused by the stressful/traumatic experience increase. Another measurement tool is the Stress-Related Growth Scale, which was developed by Park, Cohen and Murch (1996) and first translated into Turkish in its long form in 2001. The long form consists of 50 items and is one-dimensional. Increasing scores indicate an increase in positive outcomes caused by individuals' stressful experiences. Although there are other measurement tools measuring various dimensions of growth or measuring structures like growth, studies using these two scales were preferred because they are the most used valid and reliable measurement tools in this meta-analysis. The following inclusion criteria were taken into consideration in determining the studies to be included in the research;

- The studies should be quantitative.
- The studies should be in Turkish or English.
- The studies were conducted in Türkiye.
- Using the Posttraumatic Growth (Tedeschi & Calhoun, 1996) and Stress-Related Growth (Park, Cohen & Murch, 1996) scales were used to assess posttraumatic growth.
- Including statistical information about the sample size and correlation coefficient needed to calculate the effect size in the studies.
- Including correlation values for the total scores obtained from the measurement tools used for posttraumatic growth and social support in the studies.

As a result of the literature review conducted in line with the inclusion criteria, 5766 studies were reached. These studies were computerized and repetitive publications were removed. Then, the titles, abstracts, and full texts of the scanned studies were analyzed. During the analysis, articles that did not meet the inclusion criteria were excluded. 45 research were determined for posttraumatic growth and social support based on the inclusion criteria included in the meta-analysis. Results of the literature review of this process are given in Figure 1.

Figure 1. Procedural Steps for The Studies Included in The Meta-Analysis



CODING OF THE STUDIES

A coding template was created to identify studies that were included in the meta-analysis and to perform data analysis. The authors' name, publication year, type of publication, study group, sample size, measurement tools used, and correlation values between variables were entered into the coding sheet to calculate the effect size of the studies included in the meta-analysis. Descriptive information about the studies included in this review is presented in Table 1. The coding performed by the author was re-coded by another independent researcher, and the coding was compared. Before proceeding to the analyses, the differences between the coding were eliminated, and the analyses were started.

Table 1. *Characteristics of the Studies Included in the Meta-Analysis*

<i>Authors and Publication Date</i>	<i>Publication</i>	<i>N</i>	<i>Working Group</i>
Elçi, 2004	Thesis	136	Families with Children with Autism
Güven, 2010	Thesis	190	Adults Who Lived Through the Marmara Earthquake
Özlü, Yıldız & Aker, 2010	Article	100	Caregivers of People with Schizophrenia
Tarhan, 2011	Thesis	122	Women Exposed to Violence
Şakiroğlu, 2011	Thesis	199	Adults Living in Kaynaşlı
Koca-Atabey, Karancı, Dirik & Aydemir, 2011	Article	70	Disabled University Students with Physical Impairments
Tanrıverdi, Savaş & Can, 2012	Article	105	Cancer Patients
Etişken, 2013	Thesis	70	Infertile Individuals
Akçayır, 2014	Thesis	62	Women with Breast Cancer
Moğulkoç, 2014	Thesis	117	Parents of Children with Cancer
Yağız et al., 2014	Article	80	As (Ankylosing Spondylitis) Patients
Coşar, 2015	Thesis	66	Breast Cancer Patients Who Have Undergone Surgery
Öksüzler, 2015	Thesis	161	Elderly People Who Have Lost Their Spouses
Bağlama & Atak, 2015	Article	31	Individuals Who Have Lost a First-Degree Relative or Romantic Partner
Ekim & Ocakçı, 2015	Article	108	Individuals Who Experienced the Kocaeli Earthquake and Currently Live in Kocaeli
Yılmaz & Zara, 2016	Article	132	Syrian War Victims
Çapar, 2016	Thesis	187	Breast Cancer Patients Who Have Undergone Surgery
Şimşir, 2017	Thesis	313	Elderly People Who Have Lost Their Spouses
Balaban et al., 2017	Article	109	Caregivers of Schizophrenia Patients
Gül & Karancı, 2017	Article	498	Adults
Şimşek, 2018	Thesis	120	Cancer Patients
Yurtsever, 2018	Thesis	90	Lung Cancer Patients
Dirik & Göcek-Yorulmaz, 2018	Article	125	Type 2 Diabetes Patients for at least One Year
Kına, 2019	Thesis	324	Individuals Over 23 Years of Age
Durak & Şenol-Durak, 2019	Article	218	Diabetes Patients
Adsever, 2019	Thesis	121	Individuals with Acquired Physical Disabilities
Meral, 2019	Thesis	119	Parents of Pediatric Hematology Patients
Akın, 2019	Thesis	119	Individuals Who Have Had a Myocardial Infarction
Kaplan Alkan, 2020	Thesis	142	Families of Martyrs
Altınışik, 2020	Thesis	431	Syrian Adolescents
Yücel & Öztürk, 2020	Article	388	Married Couples
Çimen, 2020	Article	60	Participants From Different Professional Groups
Gökahmetoğlu, 2021	Thesis	104	Individuals Receiving Care at AÇSHB
Yazıcı, Özdemir & Koca, 2021	Article	350	University Students
Yegengil, 2021	Thesis	200	Parents with Children with Special Needs
Kanat & Özpolat, 2021	Article	80	Breast Cancer Survivors with and without Posttraumatic Stress Disorder
Doğançay, 2021	Thesis	462	Traumatized University Students
Fariz, İlyas & Fariz, 2021	Article	266	Health Workers
Kömürcü & Kuzu, 2022	Article	88	Dialysis Patients and Caregivers
Karakoç, 2022	Thesis	467	Individuals Between the Ages of 18-35
Taş, 2022	Thesis	182	Women with Breast Cancer During Covid-19
Uğuz, 2022	Thesis	133	Organ Transplant Recipients
Yıldız, 2022	Thesis	62	Nurses Who Have Cared For/Are Caring for Covid-19 Patients
Ezerbolat Özateş, Özpolat & Göğüş, 2022	Article	80	Caregivers of Schizophrenia Patients
Yıldız, Demir & Sarıtaş, 2022	Article	117	Liver Transplant Recipients

DATA ANALYSIS

Comprehensive Meta-Analysis (CMA) software was used for the analysis of this study. The random effects model was preferred to estimate the overall effect size value for the relationship between the variables. The sample size and correlation values of each study were entered into the dataset to address the relationship between growth after trauma and social support through meta-analysis. First, the effect sizes of each study included in the meta-analysis were calculated separately using Fisher's z-scores. The confidence interval was taken as 95% in the effect size calculations. According to Cohen (1988); .20 is small, .50 is medium, and .80 is large effect size. These criteria were considered in the evaluation of the findings. The combined effect size of all studies was then calculated, publication bias was investigated, and a heterogeneity test was performed. This is because the random effects model, which assumes that studies with different effect sizes represent a randomly distributed sample, provides a deeper understanding that cannot be obtained by examining the means and standard deviations of effect sizes (Hedges, 1983). To assess the heterogeneity in the study, a Q test was conducted, and the I^2 index was calculated. While the Q test provides information about the heterogeneity of a series of studies, the extent of this heterogeneity is handled using the I^2 test (Huedo-Medina et al., 2006). The values obtained for the Q test were evaluated at a $p < .01$ confidence interval. A classification method was used to evaluate the magnitude of the I^2 value, meaning 25% low, 50% medium, and 70% high heterogeneity (Higgins & Thompson, 2002). To assess the heterogeneity in the study, a Q test was conducted, and the I^2 index was calculated. Rosenthal's fail-safe N, Begg and Mazumdar rank correlations, and Egger's regression test were used to test for publication bias (Thornton & Lee, 2000). In the study, a significance level of .05 was taken as a basis for all statistical calculations.

RESULTS

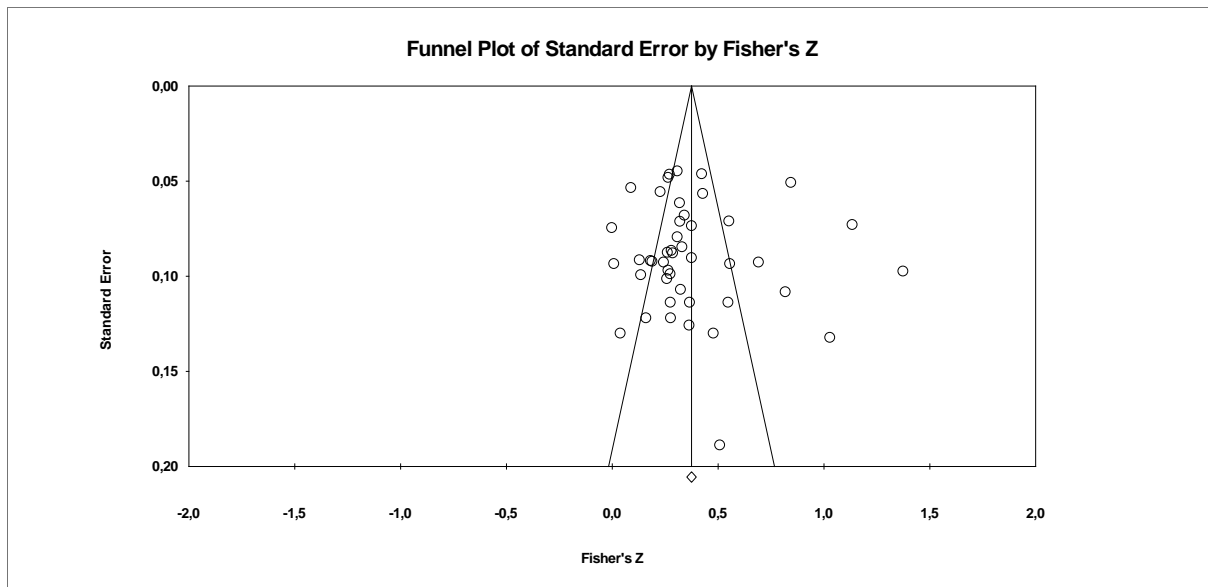
GENERAL CHARACTERISTICS OF THE STUDIES INCLUDED IN THE STUDY

Approximately 55% of the studies included in the meta-analysis were theses and 45% were articles. The publications included in the study were carried out between 2004-2022 and consist of 7704 participants in total. 45 studies with 7704 participants were included in the meta-analysis. 4630 of the participants were women, 3030 were men, and 44 unspecified. Posttraumatic Growth Inventory was used as a data collection tool for 42 of these studies, Stress-Related Growth Scale was used for 3. Descriptive information about the studies is given in Table 1.

FINDINGS ON PUBLICATION BIAS

Before proceeding to the meta-analysis, publication bias was evaluated in line with the methods specified in the data analysis section. Rosenthal's fail-safe N, Begg and Mazumdar rank correlations, and Egger regression test were used to examine the publication bias. First, Rosenthal's fail-safe N number was calculated. The fail-safe N is 11344. This means that we would need to locate and include 11344 'null' studies for the combined 2-tailed p-value to exceed 0,05. Put another way, there would need to be 252,1 missing studies for every observed study for the effect to be nullified. Mullen, Muellerle, and Bryant (2001) state that when considering the fail-safe N value, the number calculated with the $N/(5k+10)$ formula is greater than 1, which proves that there is no publication bias. Accordingly, Rosenthal's criterion value calculated for this study was calculated as 48. This was evaluated as evidence that there was no publication bias. This finding related to publication bias was also examined with the funnel plot and the results are shown in Figure 2.

Figure 2. Funnel Plot



In addition, Begg and Mazumdar rank correlation test and Egger regression test were conducted to evaluate publication bias. Begg and Mazumdar's rank correlation test result and Egger regression test result were not significant ($p > .05$). In this research Kendall's tau b is 0.10, with a 1-tailed p-value of 0.17 or a 2-tailed p-value of 0.34. According to the Egger regression intercept, which is a stronger test for publication bias, (B_0) is 0.51, 95% confidence interval (-2.65, 3.68), with $t=0.33$, $df=43$. The 1-tailed p-value is 0.37, and the 2-tailed p-value is 0.74. The fact that the p-value is not statistically significant in these methods is interpreted as no publication bias (Şen & Yıldırım, 2020). Accordingly, the analysis results were interpreted as no publication bias in the meta-analysis study. Findings regarding the Begg and Mazumdar rank correlation test results are given in Table 2.

Table 2. Results of Begg and Mazumdar Rank Correlation and Egger Regression Test

	<i>Begg and Mazumdar Rank Correlation</i>	<i>Egger Regression Test</i>
Kendall's S statistic (P-Q)	99	-
Tau	0.10	-
z-value for tau	0.97	-
p-value		.51
p-value (1-tailed)	0.17	.37
P-value (2- tailed)	0.33	.74

HETEROGENEITY AND META-ANALYSES OF EFFECT SIZE

Correlation values and sample sizes between posttraumatic growth and social support were collected from 45 studies ($N = 7704$) that met the inclusion criteria. Then, all values were converted to Fisher's z. Before proceeding to the meta-analysis, the studies were examined for heterogeneity. The data were subjected to a heterogeneity test. For this purpose, the Q statistic was obtained, and the I^2 and τ^2 value was calculated. The results obtained are given in Table 3.

Table 3. Results of Random Effect Meta-analyses

<i>k</i>	<i>N</i>	<i>ES_r</i>	<i>95% CI</i>	<i>Z</i>	<i>P_z</i>	<i>Cochran's Q</i>	<i>P_Q</i>	<i>I² (%)</i>	<i>τ²</i>
45	7704	0.37	[0.31-0.46]	9.64	<.00	499.10	<.00	91.18	0.06

Note. k = number of studies, Cochran's Q = tests of heterogeneity, N = number of participants in all studies, CI = confidence interval

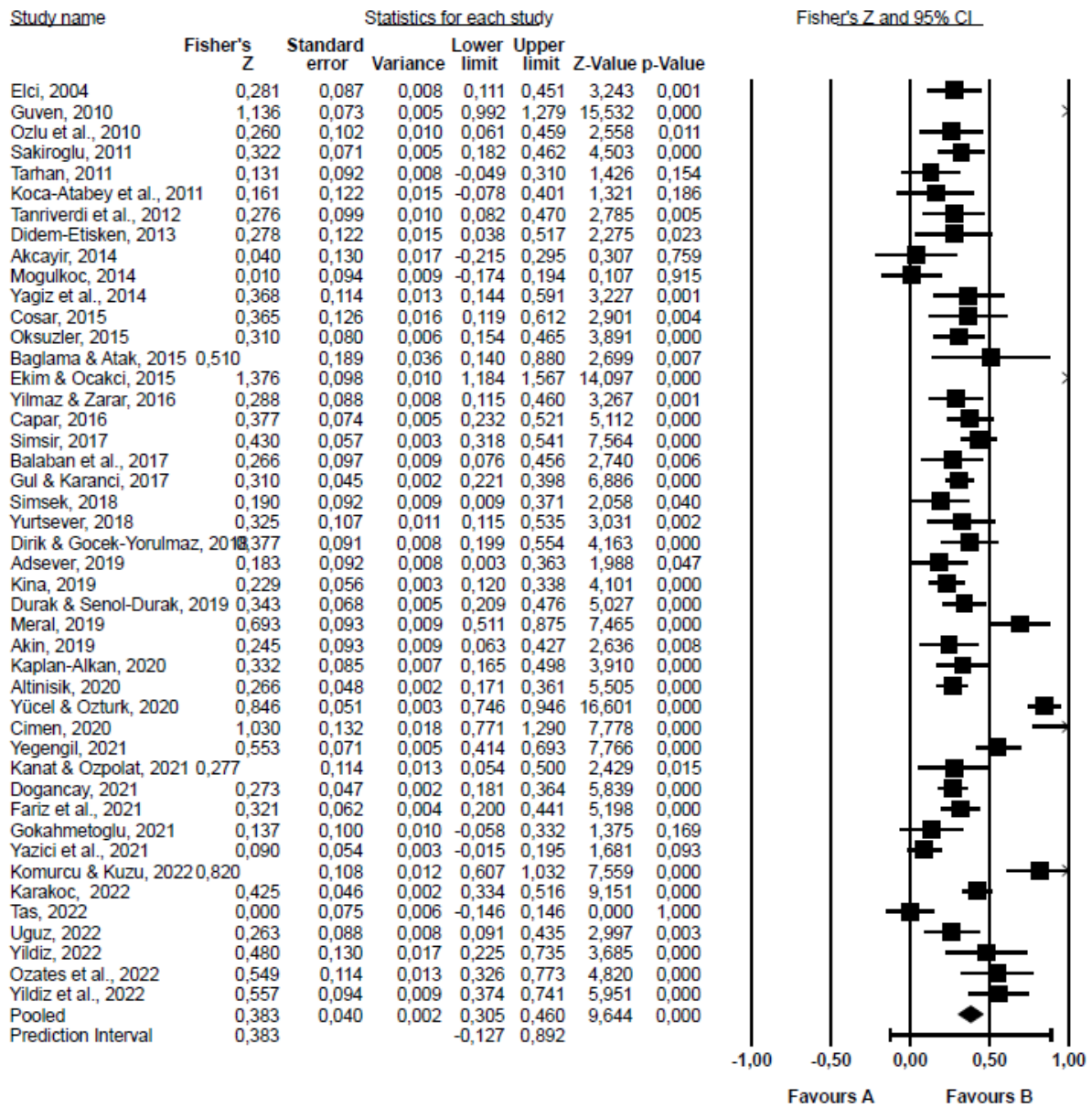
The τ^2 (0.06) statistic was used to evaluate heterogeneity. It was concluded that this difference cannot be fully explained by the variance within the studies, since there are differences between the studies according to the τ^2 statistic and the variance within the study is at a minimum level (Borenstein, Hedges, Higgins & Rothstein, 2010). As a result of the heterogeneity test, the Q (df = 44) statistic value was calculated as 499.10 ($p < .01$). The Q value obtained exceeded the value at 44 degrees of freedom and .05 confidence level (df = 44, $\chi^2(.05) = 60.48$) read from the chi-square table, which was interpreted as heterogeneous data. The Q-statistics were found to be significant ($p < .00$, Q = 499.10 with df = 44) The I^2 value, which is another method of testing heterogeneity, was found to be 91.18%. As the I^2 statistic, which enables comment on the amount of variance in correlated measurements, approaches zero, it is stated that the observed variance is not real (Dinçer, 2022). The I^2 value of 91.18% obtained in this research indicates a high level of heterogeneity (Higgins & Thompson, 2002).

Findings showed that heterogeneity was achieved. A meta-analysis of the relationship between posttraumatic growth and social support was then conducted. Statistics and forest plots for the 45 included studies as explained in Figure 3.

When Figure 3 is examined; it is seen that the relationship between posttraumatic growth and social support varies between .00 and 1.37. Under the random-effects model, the mean ES value of the overall effect size (in terms of Fisher z) obtained from 45 studies was found to be .38 with a 95% confidence interval of 0.31-0.46. The Pearson correlation coefficient of the effect size value obtained in Fisher z was found to be .37. In Figure 3, the distribution of effect sizes obtained from each study included in the meta-analysis can be examined.

The meta-analysis results were evaluated according to the random effects model. The random effects model accepts that the effect sizes in the studies conducted based on the assumption that there may be different effect sizes under different studies represent a random sample from a certain distribution (Borenstein et al., 2010). Dinçer (2022) states that if the universes of the studies are not of the same size, the random effects model should be used. Accordingly, in this study, the results were evaluated based on the random effects model and the random effects model was taken as a basis when interpreting the effect size values obtained in the study. According to the random effects model, the effect size of 45 studies was .38 in Fisher z; It was found to be .37 in terms of the Pearson Correlation coefficient. Cohen (1988) stated that effect sizes between .20 and .50 are medium. Accordingly, it can be stated that the relationship between posttraumatic growth and social support is medium.

Figure 3. Statistics on Studies and Forest Graphs



DISCUSSION

In this study, the relationship between posttraumatic growth and social support was examined by the meta-analysis method. With this method, the findings of scientific studies examining the relationship between posttraumatic growth and social support were statistically analyzed and reinterpreted, and a common judgment was tried to be reached about the relationship between the two variables by combining the findings. For this purpose, 45 studies that met the criteria for inclusion in the meta-analysis were examined. 55% of the studies were theses and the total sample size of the studies was 7704.

The publication bias of the included studies was examined by Rosenthal's fail-safe N, Begg, and Mazumdar rank correlations and Egger regression test, and no evidence of publication bias was found. While examining the relationships between variables, a heterogeneity test was performed, and effect sizes were examined. According to the random effects model, it was determined that there was a moderately significant relationship between posttraumatic growth and social support. Our findings,

which are in line with the findings in the literature (Dirik & Karancı, 2008; Jia, Ying & Lin, 2017; Yu vd., 2014) show that there is a significant positive relationship between posttraumatic growth and social support and that the relationship is continuous in the context of Turkish culture in the face of different stressful stimuli.

It is known that receiving social support can reduce the impact of stressors (Anisman, 2015). With social support resources, individuals feel stronger, and their belief that they can cope with stress may increase, through these resources, individuals both support their well-being and develop their resources (Niemic, 2019). A review of models and approaches explaining posttraumatic growth shows that social support emerges as an important factor. Schaefer and Moss (1992), in their model of life crises and personal growth, state that the environmental and personal systems of the individual affect the outcomes of life crises and their aftermath. According to the model, the environmental system that can cause growth includes the social support resources that individuals have and growth results in the context of these factors. Similarly, Tedeschi and Calhoun (2004) state in the functional descriptive model that the relationship between individuals and their social environment can affect growth through the effect of stress on cognitive processing. Regression studies have also found that social support predicts growth after trauma (Dong et al., 2015; Li et al., 2012; McDonough, Sabiston, & Wrosch, 2014). As can be seen, social support is seen as an important variable related to individuals' coping processes and stress-related factors, and its role in the realization of growth is underlined. Social support helps individuals tolerate their emotional, behavioral, and cognitive processes and enables individuals to maintain their integrity to maintain functional coping behaviors in stressful situations by providing expression of emotions (Yılmaz & Zara, 2016). Through social support, individuals can experience growth by exploring new possibilities in life (Hijazi et al., 2015). Social support, which is thought to facilitate posttraumatic growth by reducing perceived stress (Yeung & Lu, 2018), may be associated with the constructive development of individuals (Pat-Horenczyk et al., 2015). Therefore, social support may serve as an important protective resource above and beyond the protection it offers (Siegel & Schrimshaw, 2007) and should be considered in terms of posttraumatic growth.

SUGGESTIONS

The results of this study underlined the importance of social support in preventing the effects of stress. Considering the negative effects of stress, increasing, and supporting resources that will positively affect growth will become a priority for mental health professionals. While carrying out mental health studies, it is recommended to work on strengthening the social support resources of individuals who struggle with intense stressors.

Although the findings of this study reveal the relationship between posttraumatic growth and social support, they provide only limited information about the nature of this relationship. For this reason, more studies based on different methodological and statistical analyses that address the relationship between the two variables are needed. Getting support from our social environment is one of the most important ways to reduce the effects of stressors and is used as a coping method. However, it is known that it is not only social support that is beneficial but also the quality of support (Anisman, 2015). The availability and use of social support are important factors in facilitating better short- and long-term outcomes after facing adversity. When people know that they have sources of help, they can provide support to reduce stress and cope (Berger, 2015). Therefore, variables such as the type of social support, its purpose, and how it is used may cause differences in terms of growth. Therefore, studies can be designed to consider how such changes make a difference in terms of post-traumatic growth. In addition, considering that there may be differences based on cultural context in terms of social support, it may be recommended to conduct quantitative and qualitative studies in which the relationship between growth and social support is culturally addressed.

The observed relationship between posttraumatic growth and social support suggests that increasing sources of social support may be important for individuals facing highly stressful life events. Social support may be a way to promote posttraumatic growth (Benetato, 2011; Yeung & Lu, 2018). For this purpose, it is thought that mental health professionals aiming to increase growth in personal, social, and coping areas should focus on social support (Dirik & Karancı, 2008; Şakiroğlu, 2011; Şenol-Durak & Ayvaşık, 2010; Yu et al., 2014). The role of social support in the emergence of posttraumatic growth may contribute to individuals facing challenging life events. Therefore, mental health professionals should help individuals recognize the people they can trust in times of crisis and improve their perceptions of social support in the context of responding to stressful experiences (Jia et al., 2017). Ensuring awareness of existing social supports in mental health services will be a facilitator of growth (Gül & Karancı, 2017). Therapeutic work that involves the client in social activities related to regular and consistent interaction can increase growth (Michael & Cooper, 2013). Active coping styles and social support foster positive schema change. Assessing these two factors is very important. Individuals should be educated about various coping strategies and the benefits of active coping. They should also be encouraged to seek help from others around them. Self-disclosure, reflection, and listening to the experiences of others should also be recommended to promote positive outcomes (Schexnaildre, 2011). Therapists should strengthen individuals' social resources in the face of stressful situations, encouraging them to connect, trust and accept family support as a resource that can improve their mental health and enable them to grow (Sobol & Ben-Shlomo, 2019). Individual and group psychological counseling practices and psycho-educational groups prepared in this direction can be recommended.

LIMITATIONS

This meta-analysis study is important in terms of addressing the relationship between posttraumatic growth and social support in a holistic manner and ensuring that the findings can be evaluated and interpreted holistically. However, it should be kept in mind that this study has some limitations. The first of these limitations is that only published studies were included in the meta-analysis study. The second limitation is that the research is based only on studies that address the relationships between variables and include statistical data on this relationship. For example, if correlation values were not included in the studies dealing with the variables with the regression model and these findings were not shared with the researcher by the authors, these data were excluded from the scope of the article. The third limitation of the study is that only the results of the studies conducted in Türkiye were included in the study. The fourth limitation is the inclusion of articles using Post Traumatic Growth (Tedeschi & Calhoun, 1996) and Stress-Induced Growth (Park et al., 1996) scales to assess post-traumatic growth. Different measurement tools that measure growth and similar structures were not included in this study. Another limitation is that the analyses are based on findings obtained from cross-sectional data. Another limitation is that subgroup analyzes were not performed in this study. Finally, the studies that constitute the data set of this study are limited to those obtained from the analyzed databases. These limitations should be taken into consideration when evaluating the findings of this study.

CONCLUSION

Today, stress and stressful situations are quite common, and it is almost impossible not to be affected by stress. However, it is also known that stress does not only have negative effects but also causes improvement in individuals' personal, social, and coping skills. Social support is known to have a buffering role in the negative effects of stress. As far as is known, there is no meta-analysis study dealing with the relationship between these two variables. Although the study has some limitations the current findings of the meta-analysis were consistent with the results of previous studies. The

analyses showed that there is a significant positive relationship between posttraumatic growth and social support. However, there is limited information on how the relationship between posttraumatic growth and social support works. It is necessary to better understand the mechanism between these concepts, which are important for preventive mental health, and to conduct studies for this purpose.

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