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Predicting Trait Anxiety and Depression Symptomatology in Young Adults: The Role of Positive Early Childhood Memories

Genç Yetişkinlerde Sürekli Kaygı ve Depresif Belirtileri Yordama: Olumlu Erken Çocukluk Anılarının Rolü

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ABSTRACT

The role of negative early memories has been shown to be linked with various adult psychopathologies. Some however claim positive early memories to be a better predictor of psychopathology. The aim of this study was to test this assumption for trait anxiety and depressive symptoms in a Turkish sample. First, the Early Memories of Warmth and Safeness Scale-EMWSS was adapted into Turkish using a sample of 200 high-school and 213 university students. Findings from Exploratory and Confirmatory Factor Analyses confirmed the original single-factor structure, while tests of reliability revealed excellent results. Secondly, EMWSS-Turkish Version (EMWSS-T), Trait Anxiety Scale (TAS) and Beck Depression Inventory (BDI) were administered to an independent sample of 121 university students to test the predictive power of EMWSS-T on trait anxiety and depressive symptoms. Results showed that EMWSS-T significantly explained 20% and 11% of the variance in TAS and BDI, respectively and discriminated normal and above-normal BDI scorers. In conclusion, the study was able to confirm the role of positive early memories in trait anxiety and depressive symptomatology. In addition, a new supplementary measure for detecting psychopathological symptoms were introduced to clinical and post-secondary educational settings.

Article Information

Keywords

The Early Memories of Warmth and Safeness Scale
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Anahtar Kelimeler

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ÖZET

Olumsuz erken anıların yetişkinlikte pek çok psikopatoloji ile bağlantılı olduğu belirlenmiştir. Bazı araştırmacılar ise olumlu erken anıların psikopatolojiyi daha etkili yordadığı savunmaktadır. Bu araştırmanın amacı, bu varsayımın bir Türk örneklemini üzerinde sürekli kaygı ve depresif belirtiler bağlamında sınanmasını içermektedir. İlk aşamada, 200 lise, 213 üniversite öğrencisi üzerinde Şefkat ve Güvene Dayalı Erken Anılar Ölçeği'nin Türkçeye uyarlanması çalışması gerçekleştirilmiştir. Açıklayıcı ve doğrulayıcı faktör analizi bulguları original ölçeğin tek faktörlü yapısını doğrulamış, güvenilirlik çalışmaları ise mükemmel sonuçlar ortaya koymuştur. İkinci aşamada, ölçeğin sürekli kaygı ve depresyon belirtilerini yordayıcılığını sınamak amacıyla 121 üniversite öğrencisinden oluşan bir örnekleme ölçekle birlikte Sürekli Kaygı Ölçeği ve Beck Depresyon Envanteri uygulanmıştır. Bulgulara göre Şefkat ve Güvene Dayalı Erken Anılar Ölçeği – Türkçe Versiyonu Sürekli Kaygı Ölçeği ve Beck Depresyon Ölçeği puanlarındaki varyansın sırasıyla %20 ve %11'ini açıklamış, ayrıca Beck Depresyon Envanteri'nde normal ve normal-üstü puan alan iki grubu anlamlı düzeyde ayırt etmiştir. Sonuç olarak bulgular, olumlu erken anıların, sürekli kaygı ve depresyon belirtilerinde yordayıcı bir değişken olduğunu doğrulamıştır. Ayrıca, klinik ve yükseköğretim ortamlarında psikopatolojik belirtileri belirlemeyi destekleyebilecek bir ölçme aracı da alana diğer bir katkı olarak sunulmuştur.

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INTRODUCTION

Early life experiences can have permanent effects on one's psycho-social development and maturation while these effects may be positive and/or negative depending on the perceived quality of those experiences (Cassidy, 2008; Gilbert et al., 2003; Richter et al., 2009; Porcerelli et al., 2016). According to Porcerelli and colleagues (2016), whether early memories are recalled or not, psychoanalytic and cognitive-behavioural theories lead us to believe that early memories seem to reveal important aspects of our personality. This supposition is perhaps best supported by the works of Bowlby. Bowlby's theory of attachment provides a framework for understanding the link between the quality of one's early relationships with primary caregiver(s) and psycho-social development/mental health in the short and long run. Through these early social experiences, the child begins to form internal working models (mental representations of the self, the world and the others) which guide her in relating to self and others (Cassidy, 2008; Silva et al., 2019). Positive relationships involving responsive, warm and accepting caregiver attitudes and behaviours yield positive inner working models that foster positive social and psychological outcomes later in life, whereas the opposite has been shown to result in adolescent or adult psychopathology (Allen, 2008; Clulow, 2007; Silva et al., 2019).

With the beginning of Bowlby's statement that attachment is a "from the cradle to the grave" thing for the humankind, empirical evidence concerning the long term effects of attachment styles on adolescent and adult well-being began to pile up substantially. These studies have yielded empirical evidence as well as clinical-based arguments for the link between child attachment style and psychological well-being/psychopathology in adolescence and adulthood. This line of research was able to show the predictive value of attachment styles on many psychopathological conditions including alexithymia (Barbosa et al., 2011), eating disorders (Tasca et al., 2013), psychotic conditions (Huguelet et al., 2015), self-injurious behaviour (Kharsati & Bhola, 2016), depression, obsessive-compulsive disorder and panic disorder (Sümer et al., 2009). One may even come across neurophysiological findings claiming that parent-infant relationships and substance abuse in adolescence and adulthood have the same neurological pathways, placing the assumption of substance abuse being a substitute for secure attachment into the picture (cited by Clulow, 2007).

The specific events in one's early years may (mostly) not be recalled by the individual. However, in light of the studies mentioned above, the feelings induced by these experiences seem to give important clues regarding the individual's early social experiences. Thus, parallel with attachment research, others sought to investigate the personal judgements and perceptions regarding early childhood experiences. These studies have expanded our knowledge on the critical role of early memories on future psychological well-being and have perhaps indirectly proved the role of attachment in human social and psychological well-being throughout the life span. This actually led many to consider early memories as a potential human factor to be used in various fields including psychotherapy (Nilsson et al., 2019).

A study with women on early memories and social safeness showed that early memories had indirect associations with sense of social safeness through external shame, i.e. negative memories involving feelings of inferiority and inadequacy led women to develop fears of receiving compassion from others which led to perceiving the world as a threatening arena (Silva et al., 2019). Another study on the predictors of paranoid ideation in adolescence revealed early shame experiences to be one of the significant predictors of this psychological condition (Baretto-Carvalho et al., 2019). Gilbert and colleagues (2003) have studied the recall of early experiences involving threat and submissiveness and its

relations with depression and shame in adulthood. Based on their findings, the authors concluded that submissive behaviour to avoid getting hurt by parents during childhood carried a risk for adult depression and/or external shame.

The studies described above made use of negative early memories in explaining certain psychopathological conditions. Richter and colleagues (2009) on the other hand, argue that although negative early memories are proved to be in the picture, the possible effects of positive memories on psychiatric conditions have not been clearly understood. Wolf and Zimprich (2016) strengthen this ideation with the claim that positive memories booster one's ability to solve future problems as well as develop and maintain healthy social relationships and vice versa. Proof for this thinking may be viewed in a few studies, to date. For instance, Marta-Simoes and colleagues (2018) found that early positive memories with adults and peers were associated with higher scores on self-compassion and perceived quality of life in women. Based on these findings, the authors concluded that memories of being cared for, loved and protected during early childhood lead to perceiving oneself as capable of promoting others' positive attention, thus resulting in considering oneself as worthy of compassion.

An earlier study by Richter and colleagues (2009) (also leading the way to our study), with 180 university students revealed that the positive emotions elicited by early experiences were stronger predictors of self-criticism, self-reassurance and psychopathology compared to the recall of parental behaviours (i.e. the actual events) during the participants' childhood years. The positive early memories in this study were measured with the Early Memories of Warmth and Safeness Scale developed within their study. EMWSS has also been adapted for Portuguese adolescents (Cunha et al., 2014) and a few years later again in a Portuguese sample of adolescents from diverse populations (Vagos et al., 2017). The latter study showed that the brief version of the EMWSS comprised of nine items may be a better measure of adolescent perceptions of their early memories for linking positive early memories and psychopathology. In addition, Cunha and colleagues (2017) adapted the Peer version of EMWSS on a Portuguese sample and their results confirmed a 12-item scale with a good model fit. The original as well as the adapted forms rested on the idea that the recall of the personal feelings rather than the actual events formed the critical link between early memories and psychological health in adulthood.

This small but important body of research seem to imply at least two important issues, which gave us the motivation to conduct this study. First, positive, rather than negative memories may be exerting a buffering effect on psychological health in adulthood, which we consider should be studied on Turkish samples. Secondly, a brief literature review on studies conducted with Turkish samples revealed no measurement tools for assessing positive early childhood memories. With these two implications in mind, the major purpose of this study was to test the predictive power of positive early memories on trait anxiety and depressive symptomatology in a sample of Turkish young adults. However, prior to answering these two questions, a sound instrument was needed. Therefore, as a first step, the psychometric properties of the Early Memories of Warmth and Safeness Scale (EMWSS) developed by Richter and colleagues (2009) was adapted to Turkish. Taken together, in addition to exploring the association between trait anxiety/depressive symptomatology and positive early memories, a new measurement tool to be introduced in clinical and psychoeducational practice was believed to be an important academic and practical contribution for the Turkish literature.

METHOD

Sampling

Two samples, one for the adaptation of EMWSS and one for testing the research questions were used. The scale adaptation was conducted with a convenience sample of 208 high school students from one high school in Izmir, Turkey and 213 undergraduate students from one Faculty of Education in an Izmir university. Data derived from 200 high school and 213 college students were found eligible for statistical analyses (N=413). The sample consisted of 156 (37.8%) male and 257 (62.2%) female students with a mean age of 19.56 (sd=2.929, range=16-44). The crosstab for gender by school revealed that 25.7% of the sample (n=106) was high school girls, 36.6% (n=151) was college girls, 15% (n=62) were high school boys and 22.8% (n=94) were college boys. The higher percentage of females in the sample was thought to be the result of the general tendency of females to choose faculties of education for college education.

The second sample formed via snowball sampling, consisted of 121 university students. 113 of these (93.4%) were undergraduate students studying in one of the three Turkish universities located in two metropolitans (two in Izmir and one in Antalya), whereas seven (5.8%) were non-students and one participant had a missing entry. The sample consisted of 68 (56.2%) male and 53 (43.8%) female students with a mean age of 22.74 (sd=3.911, range=17-37). A significant number of participants came from middle income families (n=76, 62.8%) and nearly half (n=55, 45.5%) had three or more siblings.

Instrumentation

Student Demographics Form. A 5-item Student Demographics Form was administered to both samples. An extra question on school status was added to the form in the adaptation study in order to discriminate high school and university students.

Early Memories of Warmth and Safeness Scale – Turkish Version (EMWSS-T). Data on early memories were gathered via EMWSS-T in both samples. The original EMWSS aims to measure the inner positive feelings regarding one's early childhood experiences. It contains 21 positively worded items representing the recall of feeling warm, safe and accepted as a child, rated on a 5-point Likert type scale ranging from 0 to 4 (0=No, never, 1=Yes, but rarely, 2=Yes, sometimes, 3=Yes, often, 4=Yes, most of the time). Some exemplary items from the scale are "I had a sense of belonging", "I knew I could rely on people close to me to console me when I was upset" and "I felt peaceful and calm" (Richter et al., 2009).

The original study by Richter and colleagues (2009) was conducted with 180 undergraduate students of Psychology between ages 18-49. The results of exploratory factor analysis revealed a single factor structure with factor loadings ranging from 0.64 to 0.85. The Cronbach's Alpha coefficient of the scale was reported as 0.97 (Richter et al., 2009).

Beck Depression Inventory (BDI). Adapted to Turkish by Hisli (1989), BDI aims to objectively quantify the depressive symptoms present in Turkish university students. It is comprised of 21 items rated on a 4-point Likert type scale with 0 implying minimum and 3 implying maximum degree of symptom for each item (maximum score=63). A principal components analysis using varimax rotation revealed a 4-factor solution (hopelessness, negative thoughts about self, physical concerns, self-blame). The Pearson correlation coefficient was 0.50 between BDI and MMPI-D, yielding a satisfactory result for criterion-related validity. As for reliability, the Cronbach's Alpha and split-half reliabilities were 0.80 and 0.74, respectively. The cut-off point for above-normal depressive symptomatology was determined

as 17. The BDI was administered only to the second sample and the total BDI score was used in the analyses.

Trait Anxiety Scale (TAS). Originally developed by Spielberg and colleagues (1966, cited by Öner & LeCompte, 1983), TAS was adapted to the Turkish population by Öner and LeCompte (1983). TAS consists of 20 items which aim to measure how an individual feels in general. Seven items are reversely scored and all items are scored on a 4-point Likert type scale (1=almost never, 4=almost always, maximum score=80). The Cronbach's Alpha coefficients and the test-retest reliability coefficients were found between 0.83-0.87 and 0.71-0.86, respectively. Good criterion validity was also reported by the authors (Öner & LeCompte, 1983). TAS was administered only to the second sample of this study.

Procedures

The adaptation of the EMWSS began with the authors' contact with the corresponding author of the original study via e-mail for permission to adapt the scale. Following the author's permission, the study was approved by the Ethics Committee of the Institute of Educational Sciences of the university where the second author works (File: 19/9-178, July 05, 2019). These were followed by the Turkish translation of the scale by the second author, who is a native English and Turkish speaker. The reverse translation of the scale was conducted by another academic proficient in Turkish and English. The reverse translation was then sent to the corresponding author of the original study for a final check. Next, the first author contacted a public high school and administered the instruments to the students in their classrooms. To collect information from the university students, a Google Forms was developed. The first author attended the classes while the students completed the instruments via their mobile phones and sent the forms to the researcher through a WhatsApp Application. All participants gave informed consent prior to data collection and no personal information was requested in order to protect privacy.

Following the scale's adaptation, data on EMWSS-T and trait anxiety and depressive symptoms were collected through Google Forms using WhatsApp Groups. The Google Form prepared by the first author was sent by the second and latter author to one of their undergraduate students and these students were asked to share the Google Form on their WhatsApp groups. A total of 54 responses were received. The authors then contacted two colleagues from two different universities and were asked to repeat the procedure, resulting in the collection of data from 121 participants. Again, all participants gave informed consent prior to data collection and no personal information was requested to protect privacy.

Data Analysis

Exploratory (EFA, using Principal Components Analysis) and confirmatory factor analyses (CFA, using maximum likelihood parameter estimation) were conducted to test the single factor structure of EMWSS-T. Cronbach's Alpha coefficients and item-total correlations were examined for internal consistency and the Pearson correlation coefficient was calculated for test-retest reliability.

Two simple linear regressions were run to test the predictive power of EMWSS-T on TAS and BDI. An independent samples t-test was also conducted to investigate whether EMWSS-T scores differed between normal and above-normal BDI scorers.

All data were checked for preliminary underlying assumptions prior to all analyses. CFA was conducted using LISREL 8.8, while descriptives, EFA, reliability analyses and group comparisons were analysed using SPSS version 22 for Windows.

RESULTS

The Validity and Reliability of EMWSS-T

Construct Validity of EMWSS-T. The CFA used in testing the one-dimensional structure of EMWSS-T initially revealed measurement errors between items 9-11, 15-21 and 17-20 so these pair items were correlated to improve model fit. A brief look at these specific items showed that the item content was similar; however, the inter-item correlations were below 0.90 (Şimşek, 2007; Yaşlıoğlu, 2017) (0.68, 0.68 and 0.71 for the item pairs, respectively), showing that the items measured different things. These modifications led to a one-factor model revealing good indices of model fit ($\chi^2=555.85$, $df=186$, $p<0.001$, $\chi^2/df=2.99$, $RMSEA=0.069$, $SRMR=0.041$, $NNFI=0.98$, $CFI=0.98$), with the exception of GFI (0.89) that showed a marginal fit. The factor loadings, R2 and the t-values for each item are displayed in Table 1.

Table 1. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) Results for EMWSS-T

Item	Factor Loading	Communalities	R ²	t value
Item 1 EFA	0.58	0.33		
Item 1 CFA	0.56		0.32	12.02
Item 2 EFA	0.66	0.44		
Item 2 CFA	0.64		0.41	14.35
Item 3 EFA	0.75	0.56		
Item 3 CFA	0.73		0.51	16.98
Item 4 EFA	0.38	0.14		
Item 4 CFA	0.36		0.49	7.29
Item 5 EFA	0.67	0.45		
Item 5 CFA	0.65		0.42	14.50
Item 6 EFA	0.72	0.52		
Item 6 CFA	0.71		0.50	16.27
Item 7 EFA	0.70	0.49		
Item 7 CFA	0.68		0.46	15.44
Item 8 EFA	0.72	0.52		
Item 8 CFA	0.70		0.49	16.04
Item 9 EFA	0.72	0.51		
Item 9 CFA	0.68		0.47	15.54
Item 10 EFA	0.63	0.39		
Item 10 CFA	0.60		0.36	13.10
Item 11 EFA	0.79	0.62		
Item 11 CFA	0.77		0.60	18.44
Item 12 EFA	0.76	0.58		
Item 12 CFA	0.75		0.57	17.80
Item 13 EFA	0.78	0.61		
Item 13 CFA	0.78		0.60	18.51
Item 14 EFA	0.45	0.20		
Item 14 CFA	0.43		0.57	8.94
Item 15 EFA	0.78	0.60		
Item 15 CFA	0.75		0.56	17.81
Item 16 EFA	0.56	0.31		
Item 16 CFA	0.53		0.29	11.28
Item 17 EFA	0.79	0.62		
Item 17 CFA	0.76		0.58	18.13
Item 18 EFA	0.85	0.73		

Item 18 CFA	0.86		0.73	21.53
Item 19 EFA	0.71	0.50		
Item 19 CFA	0.69		0.47	15.70
Item 20 EFA	0.80	0.65		
Item 20 CFA	0.78		0.61	18.74
Item 21 EFA	0.75	0.56		
Item 21 CFA	0.72		0.52	16.66

According to Table 1, the factor loadings of all items were above 0.30 (Çokluk et al., 2018), ranging between 0.36 and 0.86. The variance explained by each item (R²) ranged between 0.13 and 0.73 and all t-values were above 1.96 (7.29-21.53, $p < .05$). Taken together, these three parameters and the fit indices confirmed the single-factor solution for EMWSS-T.

Reliability of EMWSS-T. The Cronbach's-Alpha coefficient for EMWSS-T was 0.93, presenting excellent internal consistency. The means, standard deviations and the item-total correlations for EMWSS-T are depicted in Table 2.

Item	<i>M</i>	<i>SD</i>	Corrected item-total correlation	α if item deleted
1. I felt secure and safe.	3.14	1.12	0.53	0.93
2. I felt appreciated the way I was.	2.67	1.19	0.61	0.93
3. I felt understood.	2.44	1.21	0.71	0.93
4. I felt a sense of warmth with those around me.	3.29	2.25	0.35	0.94
5. I felt comfortable sharing my feelings and thoughts with those around me.	2.51	1.30	0.62	0.93
6. I felt people enjoyed my company.	2.71	1.23	0.67	0.93
7. I knew that I could count on empathy and understanding from people close to me when I was unhappy.	2.63	1.24	0.66	0.93
8. I felt peaceful and calm.	2.64	1.19	0.67	0.93
9. I felt that I was a cherished member of my family.	3.23	1.10	0.67	0.93
10. I could easily be soothed by people close to me when I was unhappy.	2.63	1.23	0.58	0.93
11. I felt loved.	3.09	1.10	0.75	0.93
12. I felt comfortable turning to people important to me for help and advice.	2.81	1.20	0.72	0.93
13. I felt part of those around me.	2.87	1.15	0.74	0.93
14. I felt loved even when people were upset about something I had done.	2.71	2.40	0.40	0.94
15. I felt happy.	2.89	1.12	0.74	0.93
16. I felt feelings of connectedness.	2.98	1.21	0.52	0.93
17. I knew I could rely on people close to me to console me when I was upset.	2.78	1.16	0.75	0.93

18. I felt cared about.	2.91	1.15	0.83	0.93
19. I had a sense of belonging.	2.93	1.30	0.66	0.93
20. I knew that I could count on help from people close to me when I was unhappy.	2.90	1.21	0.76	0.93
21. I felt at ease.	2.88	1.18	0.71	0.93

According to Table 2, the item-total correlations ranged between 0.35 and 0.83 and all items positively contributed to the internal consistency of the scale. With the exception of a change of 0.01 with the deletion of items 4 and 14, none of the item deletions resulted in changes in the Cronbach's Alpha coefficient.

The test-retest reliability was also assessed by re-administering EMWSS-T to 54 participants within a three-week interval. The calculated Pearson-r value was 0.93, revealing good stability over time.

The Predictive Power of EMWSS-T on TAS and BDI Scores

As expected, EMWSS-T displayed negative significant correlations with BDI ($r = -.333, p = .000$) and TAS ($r = -.447, p = .000$), while Q-Q scatter plots revealed EMWSS-T scores displaying negative linear relationships with BDI and TAS scores. With the remaining assumptions having met for linear regression, two separate simple linear regressions were conducted for EMWSS-T as the independent and BDI and TAS as the dependent variables. The descriptive statistics for the three measures are depicted in Table 3.

Table 3. Descriptives for EMWSS-T, BDI and TAS (n=121)

	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	Range
EMWSS-T	57.83	19.81	-.941	.400	0-84
BDI	14.46	8.64	.449	-.215	0-39
TAS	57.31	14.21	-.194	-.483	25-86

The model summary for the predictive power of EMWSS-T on BDI revealed R and R² values of 0.33 and 0.11, respectively. The results of one-way ANOVA yielded that the regression model fitted the data well [$F(1, 119) = 14.816, p = .000$]. The β coefficient for the constant and EMWSS-T score were 22.86 ($t = 9.917, p = .000$) and -0.145 ($t = -3.849, p = .000$), respectively. In sum, EMWSS-T was a significant predictor of depressive symptoms, explaining 11% of the variance. Similar findings emerged for EMWSS-T as a predictor of TAS, with R and R² values of 0.45 and 0.20, respectively, with a significant F value for model fit for the data [$F(1, 119) = 29.735, p = .000$]. The β coefficient for the constant and EMWSS-T score were 75.87 ($t = 21.104, p = .000$) and -.321 ($t = -5.453, p = .000$), respectively. Thus, EMWSS-T was found to be a significant predictor of trait anxiety symptoms, explaining 20% of the variance. The Cronbach's Alpha values for BDI and TAS were 0.86 and 0.90, respectively. The results for the linear regressions are depicted in Tables 4 and 5.

Table 4. Results of the Regression Analysis for BDI

	B	Std. Error	β	T	p	Partial Correlation
Constant	68,85	.333		20,654	.000	
BDI	-.762	.198	-.333	-3,849	.000	-.333

Table 5. Results of the Regression Analysis for TAS

	B	Std. Error	β	T	p	Partial Correlation
Constant	93,538	6,746		13,866	.000	
TAS	-.623	.1114	-.447	-5,453	.000	-.447

Following regressions, EMWSS-T scores were compared using an independent samples t-test [F(119)=.101, p=.751, Levene’s Test for Equality of Variances] across the two groups formed using the cut-off point for BDI (i.e. 17). Results revealed that EMWSS-T scores differed significantly between normal and above-normal scorers, with above-normal scorers scoring significantly lower compared to normal scorers (Table 6).

Table 6. Results of the Independent Samples T-Test for EMWSS-T across BDI

BDI score	n	M	SD	df	t	p
Normal	75	61.56	19.38	119	2.717	.008
Above-normal	46	51.74	19.16			

DISCUSSION

This study aimed to link positive early childhood memories with trait anxiety and depressive symptomatology in young adulthood. To reach these goals, the authors first adapted EMWSS to Turkish in order to measure the positive early memories of the participants. EMWSS was chosen based on its focus on measuring feelings of early positive experiences, rather than the actual experience and negative feelings associated with those experiences (Richter et al., 2009). Its practicality in administration, scoring and interpretation was also considered as additional advantages.

The findings revealed proof for the construct validity of EMWSS-T, such that the single dimensional solution found in the original (Richter et al., 2009) as well as the Portuguese versions (Cunha et al., 2014; Vagos et al., 2017) was confirmed in our Turkish sample. Although the GFI suggested a marginal fit (0.89), all other indices were at very good levels, showing the scale’s strength for measuring the early memories of warmth and safeness of Turkish adolescents and young adults. Tests of reliability also revealed strong proof for EMWSS-T with values very close to Cunha and colleagues’ (2014), Richter and colleagues’ (2009) and Vagos and colleagues’ (2017) studies (Alpha values between 0.95-0.97, test-retest Pearson r values between 0.91-0.92).

One important aspect of EMWSS-T is worth mentioning. EMWSS was originally developed for adults whereas the Portuguese full and brief versions were tested on adolescents. Our study, in a way, combined these two groups, including adolescents over age 15 and young adults and was able to offer an assessment tool that could be used in a wider age range. Thus, taken together, the results of validity and reliability studies revealed EMWSS-T to be a valid and reliable measure in late adolescence and young adulthood.

The results of simple linear regressions run to answer the main questions provided evidence for one’s early positive social memories to be a significant indicator of trait anxiety and depressive symptoms. These findings overlap with the dynamics of Western cultures including England, Portugal and Spain for both adolescence and young adulthood (Cunha et al., 2014; Cunha et al., 2017; Richter et al., 2009; Vagos et al., 2017), implying the effects of early social relationships on adult psychological well-being to be culture-free. The variance explained by EMWSS-T for depression and trait anxiety symptomatology were 11% and 20%, respectively. At first glance, although significant, these values may seem small. However, by taking into account the various factors including attachment style and perceived social support (for

example, Doğan, 2008; Marta-Simoes et al., 2018; Sümer et al., 2009; Wilson et al., 2020) that may be explaining the remaining variance in both conditions, positive early memories may be considered an important factor of its own in clinical and psychoeducational practice.

We also took advantage of the cut-off point for BDI and were able to show that EMWSS-T could significantly discriminate individuals with normal and above-normal depressive symptoms. However, some caution should be taken in interpreting the results in clinical settings. TAS and BDI are self-report measures and thus can only point to symptomatology rather than to an actual diagnosis. Thus, for the present, we recommend EMWSS-T to be used as a supplementary measure in diagnostic assessments or as a measure that may be considered helpful in identifying young adults at risk for trait anxiety and/or depression in clinical and educational settings. This may especially be useful for the Disability Services of universities in identifying and supporting students in academic and non-academic domains during their college years as well as their transition to work life.

One limitation in this study involved the samples used. The participants were chosen from among a student population in both the scale adaptation and the main study. High school students may not be considered problematic in that in Turkey, K-12 education is an obligation by law (Ministry of National Education, 2012). However, a significant proportion of Turkish youth do not transition to tertiary education. Therefore, future research should also focus on using non-student populations. Secondly, the convenience sampling procedure may be considered a limitation of its own, due to its non-probability nature where the authors choose the sample based solely on convenience. Thirdly, EMWSS-T and its predictive power on clinical symptomatology was tested on a community sample and demands studies using clinical samples. A second limitation may be the lack of measurement invariance for EMWSS-T. However, this action was not considered a necessity due to previous studies' showing the original single-factor model to work for both adolescent and young adult populations (Cunha et al., 2014; Cunha et al., 2017; Richter et al., 2009; Vagos et al., 2017).

Studies have reported that early memories are closely linked with psychopathology and that these memories usually result in internal working models that yield secure/insecure adult attachment styles (Allen, 2008; Barbosa et al., 2011; Clulow, 2007; Silva et al., 2019). Therefore, the next step should be to compare the positive early memories of samples derived from the community and clinical settings in order to determine the possible outcomes in the Turkish population, using measures for positive early memories together with adult attachment styles. Thus, future studies investigating such a model are advised and if this be verified, it will be possible to use early memories of warmth and safeness measures such as EMWSS-T to determine adolescents and young adults who may be carrying attachment problems.

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Author Contributions

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Conflict of Interest

The authors would like to report no conflict of interest with any parties.

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The study was approved by Dokuz Eylül University, the Ethics Committee of the Institute of Educational Sciences on July 05, 2019. Consent was obtained via Google Forms from all participants.

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