The psychometric properties of the Turkish version of the multidimensional neglectful behavior scale-parents form

Utku Beyazit & Aynur Bütün Ayhan

Springer

The psychometric properties of the Turkish version of the multidimensional neglectful behavior scale-parents form

Utku Beyazit[1] · Aynur Bütün Ayhan[2]

Abstract
The aim of this study was to adopt the Multidimensional Neglectful Behavior Scale – Parents Form (MNBS-PR) into Turkish and to examine the psychometric properties of the Turkish version of the Form. The participants of the study were 316 parents (166 mothers and 150 fathers) who have children between 10 and 15 years old. The validity of the Form was examined by construct and criterion related validity analysis. For the construct validity analysis, confirmatory factor analysis was performed. The analysis revealed a construct of 6 factors and 23 items. In terms of the criterion related validity, significant correlations ($p < 0.05$) were found between the scores of the Parental Acceptance-Rejection Questionnaire (PARQ) and the cognitive neglect, supervisory neglect, abandonment, failure to protect, alcohol use sub-dimensions and the total neglect scores of the MNBS- PR. The internal consistency coefficients were computed in terms of the reliability analysis. The Cronbach's alpha coefficient for the total neglect score was found to be 0.68. According to the results, this study provides an instrument that can be used for assessing parents' neglectful behaviors towards their children in a Turkish sample.

Keywords Child neglect · Neglectful behavior · Psychometric properties

In most cultures and societies, parenting practices involve goals such as meeting the needs of the children, ensuring their health and safety and preparing them for future life as independent individuals. However, beyond the significance of these goals, parenthood practices are quite complex, and may result in deficiencies in achieving these goals (Mag, 2011; Hornor 2014; Maguire-Jack and Wang 2016). As the parents are the primary caregivers, the neglect cases primarily occur in the home setting. In this context, child neglect is defined as "adults' deficiency in meeting the needs and maintaining the welfare and the protection of the child they are responsible for" (Weekerle et al. 2008; Muela et al. 2012).

Child neglect is one of the most common forms of child maltreatment (Hornor 2014; Jones and Logan-Greene, 2016) and is examined under a variety of categories, such as physical, emotional, supervisory, cognitive, medical and educational neglect (Straus 2004; Stowman & Donohue, 2005). However, unlike the other types of child maltreatment, the conceptualization and the identification of neglect is relatively harder as it is a vague concept that refers to the acts of omission, which largely result in invisible forms of harm. Hence, it can be challenging to accurately diagnose, and most cases remain undetected and continue for extended periods (Straus and Kantor 2005; Polat 2007). It is also harder to differentiate the various forms of neglect, as in most of these cases, these various forms occur concurrently (Gershater-Molko et al. 2003; Dubowitz et al. 2005).

In a number of studies on child neglect, is has been shown to be associated with a number of prominent risk factors such as alcohol and drug use of parents, depression, anti-social tendencies and relevant psychological disturbances (Stewart et al. 2006; Lee et al. 2012; Clement et al. 2016). Additionally, factors such as divorce of the parents and marital conflict (Chen et al. 2011), low socio-economic status (Dunn et al. 2002; Slack et al. 2011), unhealthy living conditions (Dubowitz et al. 2002; Berry et al. 2003) and parents' being maltreated in their childhood are among the causes of child neglect. According to the World Health Organization (1999), the screening and monitoring of such risk factors to identify the parents' who are at risk of neglecting their children must receive priority consideration in the efforts to

✉ Utku Beyazit
proz2proz@yahoo.com

[1] Psychology Department, Near East University, North Cyprus, via Mersin, Nicosia, Turkey

[2] Faculty of Health Sciences, Child Development Department, Ankara University, Ankara, Turkey

protect children against maltreatment. In terms of the strategies aiming to prevent child neglect, once the parents who are at risk of neglecting their children are detected, the assessment and the monitoring of these cases in terms of the relevant characteristics, such as prevalence, type and severity, are of significant importance (Berube et al. 2014; Dijken et al. 2016). However, although there are a variety of measurements to assess child abuse, only a limited number of measures are available to assess child neglect, such as the Parental Acceptance-Rejection Questionnaire (Rohner et al. 1980), Childhood Experience of Care and Abuse Questionnaire (Bifulco et al. 1994), the Neglect Scale (Harrington et al. 2002), the Mother-Child Neglect Scale (Lounds et al. 2004), the Maltreatment and Abuse Chronology of Exposure (Teicher and Parigger 2015). Some of these measures are self-report instruments and they assess the test participants' childhood experiences of neglect retrospectively, whereas some of them are designed to be administered by child protection professionals in social welfare services (Gershater-Molko et al. 2003; DePanfilis and Dubowitz 2005).

Due to the lack of instruments to assess child neglect in the Turkish sample, the number of studies on the subject remains very limited (McSherry 2007; Stoltenborgh et al. 2013). Only a minimal number of self-report measures assessing parents' patterns of maltreating their children have been adapted into Turkish. In these measures, child neglect is considered as a unidimensional, homogenous subtype of child maltreatment rather than a multidimensional concept which displays distinctive types and characteristics. The efforts to prevent child neglect have increased in importance as the subject has become increasingly important in the north of Cyprus, which is populated by the Turkish Cypriot community. However, no particular measures are available to assess parents' neglectful behaviors towards their children, to collect data for the scientific studies focusing on the subject, to screen the prevalence of child neglect and to examine the effectiveness of the programs designed to prevent child neglect. Taking this as the starting point, the present study aims to translate the Multidimensional Neglectful Behavior Scale – Parents Form (MNBS-PR) into Turkish and conduct its validity and reliability study. The Multidimensional Neglectful Behavior Scale was developed between the years 1995 and 2004 and consists of six different scales for the purpose of monitoring and assessing neglect experiences of children and parents neglectful behaviors of their children. The Parents Form of the scale was chosen to be adapted into Turkish as the theoretical basis is dependent of the complementary conceptualization of child neglect; in other words, the Form assesses parents' neglectful behaviors towards their children in seven different dimensions, which are physical, emotional, supervisory and cognitive neglect, as well as abandonment, failure to protect and alcohol use (Straus and Kantor 2005).

Another advantage of MNBS is that it involves a self-report format and is easier to administer.

Recently, various forms of MNBS have been used in many countries for the purpose of assessing the prevalence, severity, causes and the consequences of child neglect and the assessment of the effectiveness of child neglect prevention programs (Straus 2004, 2006).

Method

Participants

The participants in this study were parents who have children between 10 and 15 years old. The participants were recruited through their children who were attending primary, secondary and high schools in north Nicosia, which is populated by the Turkish community of Cyprus. In order to select the schools in which the pilot study was planned to be conducted, the Ministry of Education of north Cyprus was consulted. Information was obtained from the Ministry in regard to the north Cypriot community, the number and the socio-demographic profiles of students enrolled in each school. Resultantly, a total number of four schools - one primary school, two secondary schools and one high school - were chosen for the pilot study. The Turkish Form of the MNBS-PR was administered to fourth and fifth grades students in the primary school; first, second and third grade students in the secondary schools; and first grade students in the high school. The grades to which the Form was administered were chosen according to the average ages of the students in those grades, as the sample was planned to consist of six age groups between 10 and 15 years old. In each class, the forms were distributed to students in closed and anonymous envelops and they were asked to convey these envelops to their parents. In order to avoid mothers and fathers effecting each others' responses in the same household, the forms for mothers and fathers were distributed in separate classes. For instance, two classes were chosen from the fourth grade in the chosen primary school in one class, forms were distributed to children to be conveyed to mothers, while in the other class, the forms were distributed to be conveyed to fathers. The students were asked to bring the completed forms to their classroom teachers. After one week, the completed forms were collected in closed and anonymous envelops with the help of the classroom teachers and counselling services of the schools. Out of the total of 550 forms distributed, 330 forms were returned. However, 16 of the returned forms were excluded due to the high number of omitted items. Consequently, this meant that a total number of 316 parents (166 mothers and 150 fathers) were included in the study. The socio-demographic characteristics of the mothers and fathers participated in study are shown in the Table 1.

Table 1 The socio-demographic characteristics of the mothers and fathers particiapted in the study

The Socio-demographic characteristics	Mothers		Fathers		Total	
	n	%	n	%	n	%
Age groups						
30 years old and below	16	16.7	8	5.3	24	7.6
Between 31 and 40 years old	108	50.0	64	42.7	172	54.4
Between 41 and 50 years old	38	33.3	69	46.0	107	33.9
Above 51 years old	10	83.3	9	6.0	13	4.1
Place of birth						
Cyprus	82	49.4	59	39.3	141	44.6
Turkey	75	45.2	86	57.3	161	50.9
A country other than Cyprus and Turkey	9	5.4	5	3.3	14	4.4
Education level						
Able to read and write but were not graduates of any schools	11	6.6	5	3.3	16	5.1
Graduate of basic education of 11 years	101	60.8	102	68.0	203	64.2
University graduate	54	32.5	43	28.7	97	30.7

Instruments

Multidimensional Neglectful Behavior Scale-Parents Form

The Parents Form of the MNBS was developed by Kaufman Kantor et al. (2003) in the United States. The Form is a 45 item Likert-type self-report scale which can be administered to mothers and fathers who have children between 10 and 15 years old. In terms of the scoring of the original form of the scale, the responses that indicate neglectful behaviors of the parents are scored as 1, which are "never" in the positive worded items, and "often" and "always" in the negative worded items. In items 21, 37, 38, 44 and 45 "sometimes", "often" and "always" are scored as 1. The minimum score that can be obtained from the scale is 0 and the maximum score is 69. The high scores indicate the neglectful behaviors of parents towards their children (Kaufman Kantor et al. 2003; Kaufman Kantor 2004).

The validity study of MNBS-PR was conducted by Kaufman Kantor et al. between 2002 and 2003 with the participation of 327 parents who were recruited from general population. In the study, the correlations between the MNBS-PR scores and a number of measurements related to the individual and parental risk factors are examined. Resultantly, it was found that the total scores of MNBS-PR were significantly correlated with parental depression ($r = 0.17$, $p < .05$), domestic violence ($r = 0.10$, $p < .05$), lack of social support and perceived stress ($r = 0.19$, $p < .01$) and stress in family life ($r = 0.17$, $p < .01$) (Kaufman Kantor 2004). On the other hand, Holt et al. (2004) developed a shorter form of MNBS-PR by choosing 10 items among the items in the long form. In the validity study of the short form, it was found that the correlation coefficients between the long and short form of MNBS-PR varied between .42 and .76. In the study, it was also found that the scores of the Conflict Tactics Scale were significantly correlated with the long ($r = 0.25$, $p < .01$) and the short form ($r = 0.09$, $p < .05$) of MNBS-PR.

Parental Acceptance-Rejection Questionnaire (PARQ)

PARQ was developed by Rohner et al. in 1978 for the purpose of assessing the parents' acceptance and rejection of their children. The questionnaire has seperate forms that can be administered to parents, children and adolescents (Rohner et al. 1980). In the present study, the Parents Form of PARQ, which assesses a similar construct with MNBS-PR, is used as a criterion measure to examine the criterion related validity of the Turkish Form of MNBS-PR.

The original PARQ consist of 60 items. The Questionnaire has also a 24 item, 4-point Likert-type short form in which the responses range from "almost never true" (1) to "almost always true" (4). In the present study, the short form is used. PARQ consists of four sub-dimensions, namely Aggression/Hostility (6 items), Warmth/Affection (8 items), Indifference/Neglect (6 items) and Undifferentiated Rejection (4 items). In terms of the scoring, the responses are scored as "almost always true" (4), "sometimes true" (3), "rarely true" (2) and "almost never true" (1). The 13th item in the scale is scored reversely. The minimum score that can be obtained is 24 and the maximum score is 96. Higher scores indicate higher levels of rejection, whereas lower scores indicate higher levels of acceptance (Khaleque and Rohner 2013; Hoşcan 2010).

The Cronbach's alpha coefficients of the original form of PARQ were found to vary between .72 and .90 (Khaleque and Rohner 2013). The form was adapted into Turkish by Erdem (1990) and the Cronbach's Alpha coefficient was found to vary between .78 and .90.

Procedure

Initially, the required approvals to conduct the study were obtained from the Ethics Board and the Ministry of Education. Additionally, the necessary permissions from Murray A. Straus, the developer of the MNBS and Ronald Rohner, the developer of the PARQ, were provided. The school administrations and the classroom teachers were given information about the content and the procedures of the study and their permission was also obtained. In each classroom, the children were given information about the study and it was explained that their participation was purely voluntary. The ethical guidelines of the 1964 Declaration of Helsinki were followed during the course of the study and participant anonymity was ensured through the use of coded responses.

The following steps were followed to adapt the MNBS-PR into Turkish: Translation of the form from English to Turkish, assessment of the suitability of the content of the translated form and the assessment of the suitability to Turkish culture, implementation of a pilot study, conduction of confirmatory factor analysis in terms of the model fit, criterion related validity and reliability analysis. In the first step, the form was translated from English, which is the original language of the form, into Turkish by two translators. Two other independent translators back-translated the scale from Turkish to English. After the forward and backward translation, in order to examine the compatibility of the differences between the translations, all of the forms were brought together and the translation of the items were compared individually. Finally, four professionals from the fields of child development and psychology were consulted to assess the convenience of the translated form in terms of the Turkish language and necessary revisions were made according to the feedback provided by these professionals. In the second the step, eight other professionals from the fields of psychology, psychological counselling child development, social services and measurement and assessment, were consulted to examine the form in terms of the effectiveness of the items in assessing the neglectful behaviors of the parents, as well as the clarity and the comprehensibility of the items. The feedback given by the professionals for each item were recorded on the form and were compiled in order to examine the agreement levels of the professionals in terms of each item. Büyüköztürk (2004) stated that the agreement level for each item should be at least 90% and the items that have a 70–80% or lower agreement level should be revised. According to this, the items that the professionals agreed upon with a rate of 70–80% were revised according to the suggestions and feedback, whereas the items that the professionals agreed upon with a rate of 90%

percent were included in the form without any revision. Additionally, the response format of the form, which was "never", "sometimes", "often" and "always", was revised to be "almost never", "sometimes", "often" and "always". Prior to the pilot study, a pre-pilot study was conducted for the preliminary Turkish form, with the participation of five mothers and five fathers. The participants were asked to identify the items with which they had difficulty in understanding and responding. They were also asked for their suggestions in terms of the revisions of the items that they could not understand. By considering the feedback of the participants, some items were revised and some items were corrected in terms of grammar and spelling mistakes. Subsequently, the procedure continued with the pilot study. According to Seçer (2015), reliability and validity studies should consist of at least 300 participants for a robust statistical analysis. For Kline (1994, 2005), the sample size should be at least two times more than the number of items analyzed. Within this context, a total of 200 parents (100 mothers and 100 fathers) were planned to be included in the adaptation study of the scale, which originally had 45 items. The LISREL (ver, 8.80) software was used for the statistical analysis of the data collected in the pilot study.

Results

In terms of the adaptation of the MNBS- PR into Turkish, validity and reliability studies were conducted. In the validity study, construct and criterion-related validity models were employed and in the reliability study, the Cronbach's alpha coefficients were computed to examine the internal consistency.

Validity

Construct Validity In terms of the construct validity of the MNBS- PR, confirmatory factor analysis was performed. The result of the χ^2 test in terms of multivariate normality was found to be significant, indicating a non-parametric distribution of the data. In the analysis, the Relative Multivariate Kurtosis (RMK) value was found to be 1.821. A RMK value closer to 1 indicates a multivariate normal distribution. Due to the non-parametric distribution, the analysis was made according to the asymptotic covariance matrix (ACM).

According to the results of the analysis, the lowest factor loading is 0.20 (17th item). The final factor analysis revealed a construct of six sub-dimensions (cognitive, supervisory and physical neglect; abandonment, failure to protect, alcohol use) and a total of 23 items. The path diagram related to this final construct is shown in Appendix 1.

Table 2 The goodness of fit indexes related to the confirmatory factor analysis of the MNBS- PR

χ^2	sd	χ^2/sd	RMSEA	NFI	NNFI	GFI	AGFI	CFI
283.25	215	1.317	0.032	0.83	0.94	0.88	0.85	0.95

The Goodness of Fit Indexes related to the confirmatory factor analysis of the MNBS- PR are shown in Table 2.

The p value related to the difference between the expected and the observed covariance matrices (χ^2) is expected to be insignificant. In the analysis, the p value was found to be insignificant ($p = 0,0012$). The ratio of χ^2 to the degree of freedom (χ^2/sd) is one of the goodness of fit indexes assessed in the confirmatory factor analysis.

Due to the multivariate non-parametric distribution of data, the ratio of the Satorra-Bentler scaled χ^2 value to the degree of freedom is examined. The Satorra-Bentler scaled χ^2 value was computed as 283.25 and the degree of freedom was computed as 215. The ratio of these values to each other (χ^2/sd) was found to be 1.317. An χ^2/sd value of under 3 indicates a perfect fit (Kline 1994; Kline 2005). A RMSEA value under 0.05 is another indicator of perfect fit. In the analysis, a RMSEA value was found to be 0.032 (Jöroskog and Sörbom 1993). AGFI, GFI and NFI are sensitive to sample size and are more accurate in larger samples. On the other hand, NNFI and CFI values are goodness of fit indexes which are more accurate in smaller samples (Sümer 2000; Brown 2006; Tabachnick and Fidel 2013). An examination of NNFI and CFI indexes observed in the final analysis revealed that a construct of 6 factors and 23 items indicate a better fit to the data.

The Spearman correlation coefficients between the sub-dimensions of MNBS-PR are shown in Table 3.

Examination of Table 3 reveals that the sub-dimensions of cognitive neglect ($r = 0.542, p < 0.01$) and supervisory neglect ($r = 0.180, p < 0.01$) are significantly correlated with physical neglect. Additionally, the cognitive neglect ($r = 0.270, p < 0.01$) and abandonment ($r = 0.123, p < 0.01$) sub-dimensions are significantly correlated with supervisory neglect and failure to protect is significantly correlated with alcohol use ($r = 0.298, p < 0.01$).

Criterion Related Validity In terms of criterion related validity, the correlations between the MNBS- PR and PARQ are initially examined. PARQ has previously been adapted into Turkish and was chosen as the criterion related measure in this study as it assesses a similar construct to child neglect.

The Spearman correlation coefficients between the scores of the MNBS- PR and PARQ are shown in Table 4.

According to the results shown in Table X, there are significant correlations between the scores of PARQ and the cognitive neglect ($r = .171, p < 0.01$), supervisory neglect ($r = .118, p < 0.05$), abandonment ($r = .157, p < 0.01$), failure to protect ($r = .364, p < 0.01$) and alcohol use ($r = .265, p < 0.01$) sub-dimension scores of the MNBS- PR. There are no significant correlations between the scores of PARQ and the physical neglect scores of the MNBS-Parents Form ($r = .077, p > 0.01$). An examination of the correlation between PARQ and the total scores of the MNBS- PR revealed a significant and positive correlation ($r = .299, p < 0.01$).

Reliability

In terms of reliability analysis, the internal consistency coefficients of MNBS- PR are shown in Table 5.

According to the results shown in Table 5, the Cronbach's alpha coefficients of the Turkish form of MNBS-PR vary between .309 and .693. The Cronbach's alpha coefficient for the total score is calculated as .683.

Discussion

The aim of the present study was to adapt the MNBS-PR into Turkish and to examine the psychometric properties of the Turkish version. Initially, the Form was translated from English to Turkish. Afterwards, eight

Table 3 Spearman correlation coefficients between the sub-dimension scores of the MNBS- PR

Sub-dimensions	Cognitive neglect	Supervisory neglect	Physical neglect	Abandonment	Failure to protect	Alcohol use
Cognitive neglect	–	.270**	.542**	−.006	.041	.096
Supervisory neglect		–	.180**	.123*	.025	.010
Physical neglect			–	−.021	−.014	.016
Abandonment				–	.322	.234
Failure to protect					–	.298**
Alcohol use						–

** = $p < 0.01$; * = $p < 0.05$

Table 4 Spearman correlation coefficients between the scores of the MNBS- PR and PARQ

	MNBS-parents form						
	Cognitive neglect	Supervisory neglect	Physical neglect	Abandonment	Failure to protect	Alcohol use	Total
PARQ	.171**	.118*	.,077	.157**	.364**	.265**	.299**

$** = p < 0.01; * = p < 0.05$

professionals were consulted to examine the Form in terms of the clarity, comprehensibility and efficiency of the items used to assess the neglectful behaviors of the parents, The Form was revised according to feedback provided by experts. Prior to the pilot study, the Form was tested in a pre-pilot study with the participation of a total number of 10 parents. After some corrections were made in terms of detected grammar and spelling mistakes, the procedure continued with the pilot study, which consisted of a total number of 316 parents.

In the validity study, construct and criterion-related validity analysis were conducted. In terms of the construct validity analysis, confirmatory factor analysis was performed. The results of the analysis revealed a construct of 6 factors and 23 items for the Turkish form of MNBS-PR. The original Form of MNBS-PR consisted of 7 sub-dimensions (Kaufman Kantor et al. 2003). The emotional neglect sub-dimension of the original form was excluded in the Turkish Form, according to the results of the confirmatory factor analysis. It should be noted that the sample of the present study is not a clinical sample in which severe forms of child neglect were observed. In the general population, parenthood is a common social and psychological construct and almost all parents offer emotional closeness and acceptance to their children. This may be the reason why emotional neglect was not confirmed in the factor analysis of the Turkish Form. Nevertheless, such intimacy does not mean that emotionally involved and concerned parents will not be involved in any other forms of neglect; in other words, the majority of cases of child neglect in daily life are not chronic. The incidences themselves involve neglect rather than the parents.

An examination of the Spearman correlation coefficients between the sub-dimension scores of MNBS-PR revealed that cognitive neglect and supervisory neglect were significantly correlated with physical neglect. Additionally, cognitive neglect and abandonment were significantly correlated with supervisory neglect and failure to protect was significantly correlated with alcohol use. However, most of the correlation coefficients of abandonment, failure to protect and alcohol use sub-dimensions were insignificant, which may be due to the low number of items in these sub-dimensions. In the criterion related validity study, the correlations between the MNBS- PR and PARQ were examined. According to the results, the scores of PARQ and the cognitive and supervisory neglect, abandonment, failure to protect, alcohol use sub-dimensions and the total scores of MNBS-PR were significantly correlated. However, no significant correlations were found between the scores of PARQ and the physical neglect scores of the MNBS-PR. According to these results, apart from the physical neglect scores, the sub-dimensions of the MNBS-PR and PARQ measure similar constructs. The reason why the physical neglect sub-dimension was not correlated with PARQ may be that PARQ assesses a construct of emotional rather than physical neglect. However, in general, the results of the analysis provide statistical proof for the criterion related validity of the MNBS- PR.

In terms of the reliability analysis, the Cronbach's alpha coefficients were computed in order to examine the internal consistency of the Turkish form of the MNBS-PR. The coefficients for the sub-dimensions were low, although the coefficient for the total score

Table 5 The internal consistency coefficients of the MNBS- PR

	MNBS- PR						
	Cognitive neglect	Supervisory neglect	Physical neglect	Abandonment	Failure to protect	Alcohol use	Total
Cronbach's Alfa coefficients	.634	.511	.405	.309	.693	.430	.683

was closer to 0.70. The common assumption about Cronbach's alpha is that .70 is the cut-off value for being acceptable and the values between 0.70 and 0.60 are questionable (Büyüköztürk 2004). However, Nunnally (1988) stated that .70 should be treshold whereas an alpha value of 0.60 can be accepted for new measures. For the use of measures in a new culture for the first time, the treshold can be accepted as 0.60 for all scales. On the other hand according to Schmitt (1996), there is no general treshold for Cronbach's alpha to become acceptable and the measure with low values of alpha can still be useful in practice. The reason why Cronbach's alpha is below a generally accepted cut-off score of .70 in this study might be due to the limited number of items in the sub-dimensions.

Resultantly, the findings of the present study provide significant proof for the reliability and the validity of the Turkish form of MNBS-PR. The Form consists of 23 items and 6 sub-dimensions, which are cognitive neglect, supervisory neglect, physical neglect, abandonment, failure to protect and alcohol use. In each sub-dimension the number of items included are: 7 in cognitive neglect, 6 in supervisory neglect, 4 in physical neglect, 2 in failure to protect and 2 in the alcohol use sub-dimension. The sample items of the Turkish Form of MNBS-PR is shown in Appendix Table 6. In terms of scoring, the positive items (1, 2, 3, 4, 5, 6, 7, 9, 10, 12, 13, 14, 15, 16, 17) are scored as almost never (3), sometimes (2), often (1) and always (0). The negative items (8, 11, 18, 19, 20, 21, 22, 23) are scored as almost never (0), sometimes (1), often (2), always (3). The minimum and maximum scores of the sub-dimensions vary between 0 and 21, whereas the minimum and maximum scores from the overall form range from 0 to 69. The high scores indicate the neglectful behaviors of the parents.

This study provides an instrument for the assessment of parents' neglectful behaviors of their children in a Turkish sample. It is thought that the Turkish form of MNBS-PR will be beneficial in services related to the protection of children from neglect, the monitoring and screening of the high risk groups and the assessments of the effectiveness of the programs designed to prevent child neglect. However, it should be noted that the present study also has some limitations. Kaufman Kantor et al. (2003) tested the original version of the scale in a sample drawn from a general population of low level socio-economic status. Despite the fact that poverty and unemployment are among the most common risk factors that may cause child neglect (Sebre

et al. 2004; Lewin and Herron 2007; Annerbäck et al. 2010; Davidson-Arad et al. 2010the neglect of children may be seen at all levels of socio-economic status (Harrington et al. 2002; Straus and Savage 2005). Therefore in the future studies, it may be useful to test the reliability and validity of MNBS-PR in sample groups drawn from different socio-economic levels. The study consisted of a relatively small number of participants, which limits the generalizability of the results. The external validity of the scale should be improved by testing the scale on larger samples. It should also be noted that the parents may have also responded in a socially acceptable manner, resulting in inaccurate data. It may be argued that the higher the social desirability tendency, the lower neglect scores may be. Hence, the future studies should also examine the extent to which social desirability influences parents' responses, by administering established social desirability measures. Despite the results of confirmatory analysis confirming both sub-subdimensions as potential factors, the limited number of items in the abandonment and alcohol use sub-dimensions might be considered as a limitation in terms of reliability. However, the multidimensional nature of the neglect requires a multidimensional assessment of the concept. It is thought that assessment of parents' neglectful behaviours in terms of abandonment and alcohol use may be particularly useful for screening severe cases of child neglect. Therefore, the sub-dimensions were not eliminated from the form. The present study was designed only for psychometric purposes, which meant that no personal information of the participants was kept and no subsequent actions were planned to be taken. Future studies should also offer preventive and protective services for parents that are identified to be at risk of neglecting their children.
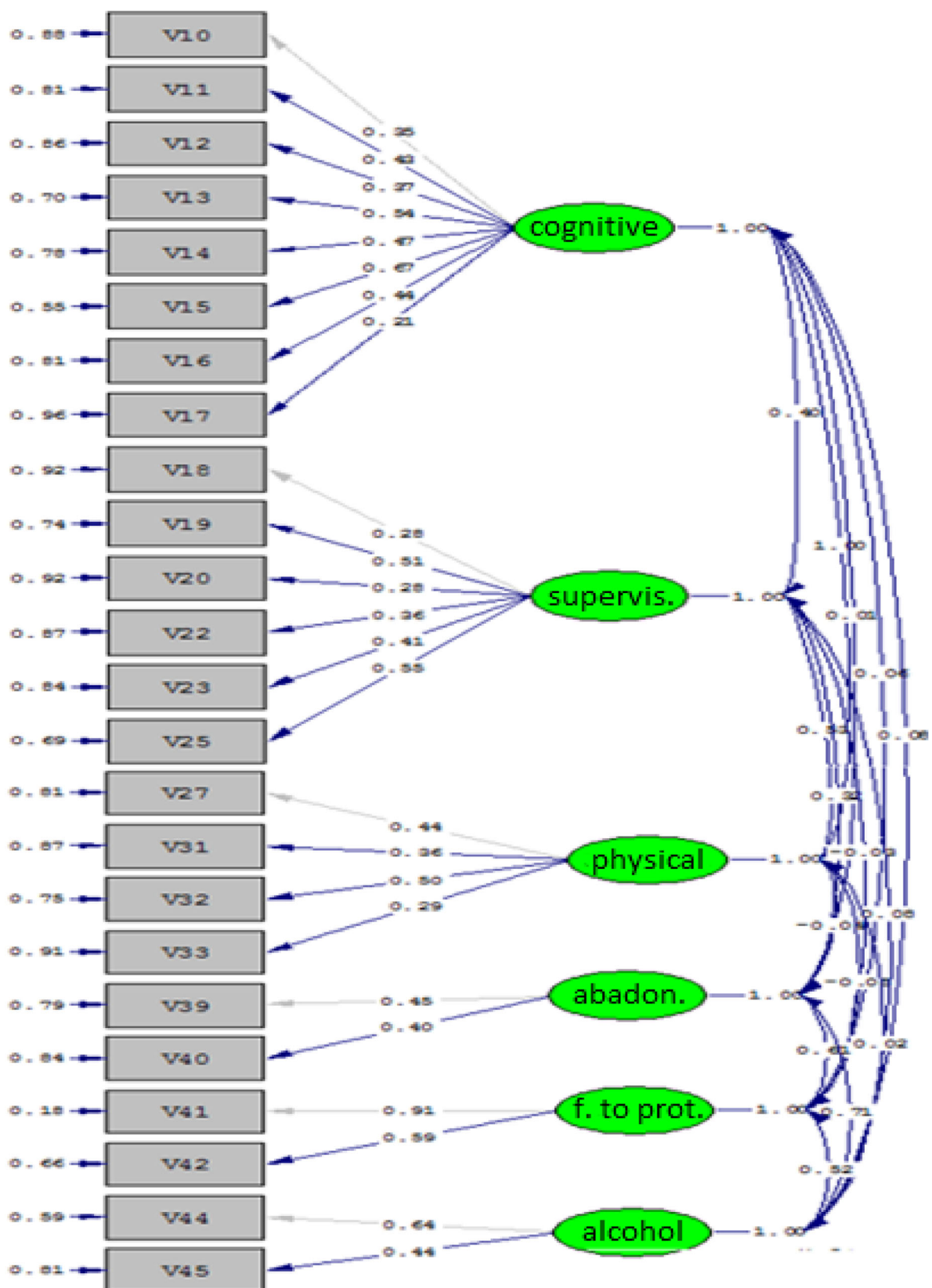
Compliance with Ethical Standards

Appendix 1

Appendix 2

Table 6 Sample items of the Turkish form of MNBS-PR

Subscales	Items
Cognitive neglect	Çocuğumun etkinliklerine ya da hobilerine ilgi gösteririm.
	Çocuğumla birlikte kitap okurum.
Supervisory neglect	Çocuğumun okuldan sonra nereye gittiğini bilirim.
	Çocuğumun birlikte olduğu arkadaşlarını tanırım.
Physical neglect	Çocuğumun banyo ya da duş yapıp yapmadığıyla ilgilenirim.
	Sağlık kontrolleri için çocuğumu doktora götürürüm.
Abandonment	Dışarıya çıkmam gerektiğinde evde çocuğuma bakacak kimse olmaz.
	Çocuğumu tanımadığı ortamlarda (mağaza, market vb.) uzun süre yalnız bırakırım.
Failure to protect	Çocuğumun duyabileceği ortamlarda eşimle kavga eder, bir şeyler fırlatırım.
	Çocuğumun görebileceği ortamlarda eşimle kavga eder, bir şeyler fırlatırım.
Alcohol use	Sarhoş olurum ve çocuğumla ilgilenmem.
	Çocuğumun alkollü içki içmesine izin veririm.

References

Annerbäck, E., Svedin, C., & Gustafsson, P. A. (2010). Characteristic features of severe child physical abuse-a multi-informant approach. *Journal of Family Violence, 25*, 165–172.

Berry, M., Charlson, R., & Dawson, K. (2003). Promising practices in understanding and treating child neglect. *Child and Family Social Work, 8*, 13–24.

Berube, A., Lafantaisie, V., Diane, D., Coutu, S., Craon, J., & Devault, A. (2014). Using implementation evaluation to uncover a child neglect prevention program. *Evaluation and Program Planning, 45*, 1–18.

Bifulco, A., Brown, G. W., & Harris, T. O. (1994). Childhood experience of care and abuse (CECA): A retrospective interview measure. *Journal of Child Psychology and Psychiatry, 35*(8), 1419–1435.

Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. N.Y.: The Guilford Press.

Büyüköztürk, S. (2004). *Data analysis handbook for social sciences*. Pegem Akademi: Ankara in Turkish.

Chen, W., Propp, J., Delara, E., & Corvo, K. (2011). Child neglect and its association with subsequent juvenile drug and alcohol offense. *Child and Adolescent Social Work Journal, 28*, 273–290.

Clement, M. E., Berube, A., & Chamberlain, C. (2016). Prevalence and risk factors of child neglect in the general population. *Public Health, 138*, 86–92.

Davidson-Arad, B., Benbenishty, R., Chen, W., Glasser, S., Zur, S., & Lerner-Geva, L. (2010). Distinguishing neglect from abuse and accident: Analysis of the case files of a hospital child protection team in Israel. *Health and Social Care in the Community, 18*(6), 614–623.

Depanfilis, D., & Dubowitz, H. (2005). Family connections: A program for preventing child neglect. *Child Maltreatment, 10*(1), 108–123.

Dijken, M. W., Stams, G. J. J. M., & Winter, M. (2016). Can community-based interventions prevent child maltreatment? *Children and Youth Services Review, 16*, 149–158.

Dubowitz, H., Papas, M. A., Black, M. M., & Starr, R. H. (2002). Child neglect: Outcomes in high-risk urban preschoolers. *Pediatrics, 109*(6), 1100–1107.

Dubowitz, H., Pitts, S. C., Litrownik, A. J., Cox, C. E., Runyan, D., & Black, M. M. (2005). Defining child neglect based on child protective services data. *Child Abuse & Neglect, 29*, 493–511.

Dunn, M. G., Tarter, R. E., Mezzich, A. C., Vanyukov, M., Kirisci, L., & Kirillova, G. (2002). Origins and consequences of child neglect in substance abuse families. *Clinical Psychology Review, 22*, 1063–1090.

Erdem, T. (1990) *The validity and reliability study of Turkish form of parental acceptance rejection questionnaire*. Unpublished Master Thesis. İstanbul: Bosphorus University.

Gershater-Molko, R. M., Lutzker, J. R., & Shermana, J. A. (2003). Assessing child neglect. *Aggression and Violent Behavior, 8*, 563–585.

Harrington, D., Zuravin, S., DePanfilis, D., Ting, L., & Dubowitz, H. (2002). The neglect scale: Confirmatory factor analysis in a low-income sample. *Child Maltreatment, 7*(4), 359–368.

Holt, M. K., Straus, M. A., & Kaufman Kantor, G. (2004). A short-form of the parent-report multidimensional neglectful behavior scale. Presentation for victimization of children and youth: An international research Conference, Portsmouth, NH, U.S.A.

Hornor, G. (2014). Child neglect: Assessment and intervention. *Journal of Pediatric Health Care, 28*(2), 186–192.

Hoşcan, S. (2010). *The examination of the mediator role of parental attitudes on the relationship between the 9–12 year old children's perception of marital conflict and life quality*. Unpublished Master Thesis. Turkey: Istanbul University.

Jones, A. S., & Logan-Greene, P. (2016). Understanding and responding to chronic neglect: a mixed methods case record examination. *Children and Youth Services Review, 67,* 212–219.

Jöroskog, K. G., & Sörbom, D. (1993). *Lisrel 8: Structural equation modeling with Simplis command language*. Lincolnwood: Scientific Software International, Inc.

Kaufman Kantor, G. (2004). Prevalence and description of child neglect: What parents report; what children say, what records show. Presentation for 9th annual Northern New England conference on child maltreatment, Portland, Maine, U.S.A.

Kaufman Kantor, G., Holt, M., & Straus, M. A. (2003). The parent-report multidimensional neglectful behavior scale. http://pubpages.unh.edu/~mas2/NS7.pdf. Accessed 15 Aug 2016.

Khaleque, A., & Rohner, R. P. (2013). Effects of multiple acceptance and rejection on adults' psychological adjustment: A pancultural study. *Social Indicators Research, 113*, 393–399.

Kline, P. (1994). *An easy guide to factor analysis*. New York: Routledge.

Kline, P. (2005). *Principal and practice of structural equation modeling*. NY: Guilford.

Lee, M. A., Schoppe-Sullivan, S. J., & Dush, C. M. K. (2012). Parenting perfectionism and parental adjustment. *Personality and Individual Differences, 52*, 454–457.

Lewin, D., & Herron, H. (2007). Signs, symptoms and risk factors: Health visitors' perspectives of child neglect. *Child Abuse Review, 16*, 93–107.

Lounds, J. J., Borkowski, J. G., & Whitman, T. L. (2004). Reliability and validity of the mother-child neglect scale. *Child Maltreatment, 9*(4), 371–381.

Mag, A. G. (2011). Parents and early teachers: Sharing eductaion. *Procedia-Social and Behavioral Sciences, 11*, 37–41.

Maguire-Jack, K., & Wang, X. (2016). Pathways from neighborhood to neglect: The mediating effects of social support and parenting stress. *Children and Youth Services Review, 66*, 28–34.

McSherry, D. (2007). Understanding and addressing the "neglect of neglect": Why are we making a mole-hill out of a mountain? *Child Abuse & Neglect, 31*, 607–614.

Muela, A., Arana, E. L., Barandiaran, A., Larrea, I., & Vitoria, J. R. (2012). Definition, incidence and psychopathological consequences of child abuse and neglect. In A. Muela (Ed.), *Child abuse a multidimensional approach and neglect* (pp. 1–19). Croatia: In Tech.

Nunnally, J. C. (1988). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Polat, O. (2007). *Child abuse: Definitions*. Ankara: Seçkin Publishing In Turkish.

Rohner, E. C., Chaille, C., & Rohner, R. P. (1980). Perceived parental acceptance-rejection and the development of children's locus of control. *The Journal of Psychology, 104*, 83–86.

Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment, 8*(4), 350–353.

Sebre, S., Sprugevica, I., Novotni, A., Bonevski, D., Pakalniskiene, V., Popescu, D., Turchina, T., Friedrich, W., & Lewis, O. (2004). Cross-cultural comparisons of child-reported emotional and physical abuse: Rates, risk factors and psychosocial symptoms. *Child Abuse & Neglect, 28*, 113–127.

Seçer, İ. (2015). *The process of developing and adapting psychological tests. SPSS and LISREL applications*. Ankara: Anı Publishing In Turkish.

Slack, K. S., Berger, L. M., Dumont, K., Yang, M., Kim, B., Ehrhard-Dietzel, S., & Holl, J. L. (2011). Risk and protective factors for child neglect during early childhood: A cross-study comparison. *Children and Youth Services Review, 33*, 1354–1363.

Stewart, C., Mezzich, A. C., & Bang-Shiuh, D. (2006). Parental psychopathology and paternal child neglect in late childhood. *Journal of Child and Family Studies, 15*(5), 543–554.

Stoltenborgh, M., Bakermans-Kranenburg, M. J., & Ijzendoorn, M. H. (2013). The neglect of child neglect: A meta-analytic review of the prevalence of neglect. *Social Psychiatry and Psychiatric Epidemiology, 48*, 345–355.

Stowman, S. A., & Donohue, B. (2005). Assessing neglect: a review of standardized measures. *Aggression and Violent Behavior, 10*, 419–512.

Straus, M. A. (2004). Guide to the multidimensional neglectful behavior scales. http://pubpages.unh.edu/~mas2/NS9%20GUIDE.pdf. Accessed 10 Sept 2016.

Straus, M. A. (2006). Cross-cultural reliability and validity of the multidimensional neglectful behavior scale adult recall short form. *Child Abuse & Neglect, 30*, 1257–1279.

Straus, M. A., & Kantor, K. (2005). Definition and measurement of neglectful behavior: Some principles and guidelines. *Child Abuse & Neglect, 29*, 19–29.

Straus, M. A., & Savage, S. A. (2005). Neglectful behavior by parents in the life history of university students in 17 countries and its relation to violence against dating partners. *Child Maltreatment, 10*(2), 124–135.

Sümer, N. (2000). Structural equation models: Basic concepts and applications [in Turkish]. *Türk Psikoloji Yazıları, 3*(6), 49–74.

Tabachnick, B. G., & Fidel, L. S. (2013). *Using multivariate statistics*. NY: Pearson.

Teicher, M. H., & Parigger, A. (2015). The 'maltreatment and abuse chronology of exposure' (MACE) scale for the retrospective assessment of abuse and neglect during development. *PLoS One, 10*(2), e0117423.

Weekerle, C., MacMillan, H. L., Leung, E., & Jamieson, E. (2008). Child maltreatment. In M. Hersen & A. M. Gross (Eds.), *Handbook of clinical psychology, children and adolescents, volume II* (pp. 114–121). U.S.A.: John Wiley & Sons.

World Health Organization. (1999). *Report of the consultation on child abuse prevention*. Geneva: Publishing of World Health Organization.