

Adaptation and Validation of Turkey Version of Multidimensional Attitudes toward Persons with Disabilities

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Abstract

The aim of this study was to examine the reliability and validity of the Turkish version of the Multidimensional Attitudes Scale toward Persons with Disabilities – MAS in university students. In total, one hundred sixty five participants were recruited from four different universities. The internal consistent reliability and convergent validity of the total scale and subscales were examined and confirmatory factor analysis was carried out. Cronbach's Alpha as for the Turkish version of the total scale of MAS, Affection, Cognition and Behavior subscale were 0.90, 0.88, 0.89 and 0.84, respectively. In the confirmatory factor analysis, three factors (Affection, Cognition and Behavior) confirmed the unitary factors structure found in original form, but three items removed, explaining % 49.19 of total variance in attitudes toward disable people ($X^2/df=1.55$, RMSEA=0.05, CFI=0.91, IFI=0.91 and GFI=0.80). Convergent validity was confirmed by positive relationship between the Turkish version of MAS and attitude towards people with disability scale (0.38 for total scale, 0.11 for affect, 0.50 for cognition and 0.36 for behavior). The Turkish version of the MAS was acceptable to be a reliable and valid measure of attitudes toward people with disability in university students.

Keywords: disability, attitude, scale adaptation, university students

Engellilere Yönelik Çok Boyutlu Tutum Ölçeğinin Türk Kültürüne Uyarlanması: Geçerlik ve Güvenir- lik Çalışması

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Öz

Bu çalışmanın amacı, Engellilere Yönelik Çok Boyutlu Tutum Ölçeğini Türkçe'ye uyarlamak ve güvenilirliğini ve geçerliğini incelemektir. Çalışma, dört farklı üniversiteden yüz altmış öğrenci ile gerçekleştirilmiştir. Ölçme aracının hem bütünü hem de alt boyutları açısından faktör yapısı, iç tutarlılığı, benzer ölçek geçerliliği, test-tekrar test güvenilirliği ve ayırt edici geçerlilik çalışmaları yapılmıştır. Bütün ölçek, Duygu alt boyutu, Düşünce ve Davranış alt boyutları için Cronbach Alfa değerleri sırasıyla, 0.90, 0.88, 0.89 ve 0.84 olarak bulunmuştur. Doğrulamalı faktör analizinde özgün form da olduğu gibi üç faktörlü (Duygu, Düşünce ve Davranış) yapı teyit edilmiş, ancak madde-toplam korelasyonu değerleri nedeniyle üç madde ölçme aracından çıkartılmıştır ($X^2 / df = 1.55$, RMSEA = 0.05, CFI = 0.91, IFI = 0.91 ve GFI = 0.80). Ölçeğin 31 maddeli Türkçe versiyonu engelli kişilere yönelik tutumun % 49.19'unu açıklamaktadır. Benzer ölçek geçerliği için, Engellilere Yönelik Tutum Ölçeği kullanılmış ve toplam ölçek ile 0.38, Duygu alt boyutu ile 0.11, Düşünce alt boyutu ile 0.50 ve Davranış alt boyutu ile 0.36 pozitif ilişki bulunmuştur. MAS'ın Türkçe versiyonu, üniversite öğrencilerinin engellilere yönelik tutumlarını çok boyutlu ölçmek için kullanılabilir ve geçerli bir ölçme aracı olarak kabul edilmiştir.

Keywords: *engellilik, tutum, ölçek uyarlama, üniversite öğrencileri*

Introduction

Although people with disability are not visible in everyday life in society, their population appears not that little. According to the study conducted by the World Health Organization-WHO (2011) people with disabilities accounted for 15% of the population all over the world. According to the study of the Turkish Statistics Institution –The Disabled Population in Turkey (2002) almost 13% of the Turkish population consists of individuals with disabilities. Percentage distribution of kind of disability population is as follows: mentally challenged people 29.2%, disabled people with chronic diseases 25.6%, orthopedically disabled people 8.8%, visually impaired people 8.4%, hearing impaired people 5.9%, psychologically and emotionally disabled people 3.9%, language and speech handicapped people 0.2% and people with multiple disabilities 18%.

The disability term is described in different ways. WHO (2011) defines it as the failure of an individual to live up to expectations based on age, gender, social and cultural factors due to their incapacity or handicap in a certain way. The United Nations define it as the inability to perform tasks in one's personal and social life without getting help from others as a result of the lack of physical or mental skills that come hereditary or adventitiously (Aslan & Şeker, 2011; Koca, 2010). The Directorate of Prime Ministry Handicap Administration, on the other hand, uses the term handicapped instead of disabled and makes the following definition:

It is a person who is incapable of adapting to social life and covering his/her everyday needs due to having lost his/her physical, mental, psychological, emotional and social skills in varying degrees by birth or later in life and is in need of being looked after or rehabilitation, consultancy and support services. (Official journal, 2010). Although such definitions seem to describe disability in a different manner, they all repeat the same line: inability to perform everyday tasks due to being incapacitated in some way.

Based on the premise that human is a social living creature, people are expected to live together harmoniously under certain rules. Those who fail to fall in line with the rules or are incapable of observing them

may be rejected from the society in one way or another. In this respect, the disable people constitute one of the biggest groups that fail to conform to the society. The members of the society may not have a distinct attitude towards those with no apparent disability, but their attitude towards those with visible disability may vary.

Attitude is a specific manner in which an object is perceived. Kağıtçıbaşı (1979) defines attitude as the tendency by which a person's feelings, thoughts and behaviors are conditioned towards a psychological object. There are two important characteristics that ultimately influence people's attitudes: (a) lengthiness (b) cognitive, emotional and behavioral patterns. According to the social learning theory, attitudes are formed through learning (Yazgan-İnanç & Yerlikaya, 2012). Attitudes are not adopted by birth, they are acquired later in life through learning. Parents, friends, mass media, personal lives are a few of the factors that play a role in the formation of attitudes (Aydın, 1985). In the same vein, it can be argued that the society's attitude towards the disabled is shaped up by information or random events or encounters.

The disabled people are faced with a number of issues both in their personal and social lives just because of their disability. Not only are they deprived of many of their fundamental rights, but they are also affected by the society's attitude towards them. Özyürek (1977) claims that the society's attitude towards the disabled affects the latter more negatively in their efforts to adapt to the society than the actual degree of their disability (Quoted by Akbuğa & Gürsel, 2007). A disabled person's adaptation to society or their exclusion by others are not derived from their social or economic status. That is, even if the state takes all institutional and legally necessary measures to enable the disabled to participate actively in social life, the social perceptions of disability may cause them to be excluded from society.. The studies suggest that such a negative attitude have adverse consequences for the disabled people in terms of their health, self respect and employment (Pruett, Lee, Chan, Wang & Lang, 2008).

Harasymiw, Horne, & Lewis (1976a; 1976b) point out that the society is more accepting of invisible disabilities (such as diabetes) compared to the more conspicuous ones (such as paralyses), mental dysfunctions

(such as depression) and the disorders for which the individual is held responsible (such as alcoholism) (Quoted by Grames & Leverentz, 2010).

Social attitudes towards the disabled people may be shaped up by the inability to fully understand them, fear of uncertainty or the thought patterns acquired from other people through social learning. Livneh (1982) has conducted a study on the causes of negative attitudes towards the disabled people and that socio-culture, childhood memories and religion all have a bearing on the formation of negative attitudes are found. Upon encountering a disabled person, most people –due to not being accustomed to the life of a disabled person- may experience anxiety and feel threatened in terms of their own physical integrity perception.

A study conducted on the general social attitude towards the disabled people found that people said nice things about the disabled but their nonverbal feelings were mostly repudiative (Daruwalla & Darcy, 2008). According to another study in Scotland, 69% of the participants stated that there is no problem for disabled people being a classroom teacher, and 76% stated that the main problem of the disabled people is the prejudices of the people in work places Bromley and Curtice (2003). Despite such encouraging remarks, however, only 4% of the participants stated that they could consider voting for a disabled candidate for the Scottish parliament.

The society's attitudes towards the disabled people are shaped up by various variables. There are studies suggesting that women of varying ages in different cultures adopt a more positive attitude towards the disabled compared to men (Avcioglu, Sazak-Pinar & Öztürk, 2005). Such a benevolent attitude on the part of women may be attributed to their designated role in the society, as they are expected to be more sensitive and protective of others.

In Japan, Horner-Johnson et., all. (2002) found that the students who had a disabled friend or relative were more sympathetic to the rights of the mentally challenged individuals. In his study where he studied the employers' attitudes towards the disabled personnel, Akardere (2005) suggests that a person's attitude towards the disabled is influenced by whether or not they have a disabled relative in their family. By contrast,

Şenel (1996) suggests that having a disabled sibling has no bearing on the formation of one's attitude towards the disabled.

The employees in certain professions are expected to have more a positive attitude towards the disabled. The examples of such professionals may include psychiatrists, social workers and religious functionaries, as these jobs require them to engage in a close interaction with other people. This is because the academic backgrounds of the professionals engaging in such professions have more emphasis on such concepts as ethics, social values and humanism (T.R. Directorate of Prime Ministry Handicap Administration, 2009). In their study, Horner-Johnson et. al (2002) found that the students from social work or psychology departments had a more positive attitude towards the disabled people. Weisel and Zaidman (2003), on the other hand, argued that, while encouraging help for the disabled people, religion also leads to discrimination and causes them to be labeled as 'not of equal statuses.

In order to find out the real meaning of social perception, one needs measurement tools that can measure such perception. In this respect, there have been researchers who have developed scales (Dökmen, 2000) or those who adapted scales into the Turkish society (Özyürek, 2006). However, they are only capable of measuring one particular dimension of the attitude. Measuring three main dimensions of the attitude will allow researchers to obtain more reliable information as to the nature of the real attitude. The purpose of this study is to adapt the Multidimensional Attitudes Scale Towards Persons with Disabilities (Findler et. al 2007) into the Turkish context. By using this scale, the affect, cognition and behavioral dimensions of people's attitude towards people with disability can be measured in a more valid and reliable way.

Method

Participants

The study consists of one hundred sixty five university students, namely sixty-seven (% 41) female and ninety-five (%57) male and three unidentified. They were studying at four different state universities. Also, they were studying at different program and different class level. The age

mean of sample is 22.88 and 90 % of them are younger than twenty-seven years old. For test-retest reliability analysis, another group of students was conducted.

Instruments

The Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS): MAS was developed to measure people's attitude towards disable people (Findler, Vilchinsky & Werner, 2007). The language of the original scale is English. Total scale is comprised of three subscales with thirty-four items. Each item has a 5-Likert type scale where 1 is not at all and 5 is very much. Affect subscale consists of sixteen items, three of them are negative, eleven ones are positive and two ones are neutral. Cognition subscale is comprised of ten items and all of them are positively keyed. Behavior subscale has eight items, six of them are negative and two of them are positive. It is possible to take score for each subscale and total scale score. Before summing up score, negatively stated items should be reversed. Minimum score of total scale can be 34 and maximum score can be 170. High score represent more positive attitudes toward people with disability.

In the original form, construct and concurrent validity were performed. To examine questionnaire's construction, explanatory factor analysis was conducted. Then, thirty-four items with factor loading higher than 0.40 were included in the final stage of the analysis. Principal component factor analysis showed three factors with an eigenvalue greater than 1, explaining 47.5 % of the total variance.

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Attitude Towards Disable People Scale: To examine the concurrent validity of Turkish form of the MAS, Attitudes Towards Disable People Scale (Dökmen, 2000) was used, because it has sufficient validity and reliability values. This questionnaire consists of 30 items measuring attitudes toward disable people. Participants were asked to respond the

degree to which they agree with the statement in each item on 5-Likert-type scale ranging from 1(exactly disagree) to 5 (exactly agree). In current study total scale yielded a high Cronbach's Alpha of $\alpha=89$. A strong relationship between this scale and Turkish form of MAS would provide support for the concurrent validity of Turkish form of the MAS.

Data Analysis

As part of the validity studies, a confirmatory factor analysis was conducted to confirm the consistency of the original scale in Turkish society. A Pearson moments correlation analysis was conducted to ascertain the relationships among the three dimensions that were present in the original scale. For the concurrent validity analysis, The Attitude Towards the Disabled Scale (Dökmen, 2000) was applied and the Pearson Moments correlation analysis performed. Within the scope of the reliability studies, the Cronbach α correlation coefficient was calculated in order to test the consistency of the scale items with each other. Moreover, in order to determine the scale's strength in terms of distinguishing the persons in higher and lower levels regarding their attitudes towards individuals with disability, a bottom to top group averages based item analysis was performed. Lastly, test-retest correlation analysis was performed. SPSS 15 and AMOS software programs were used to analyze the data and the significance level for interpreting results was determined as .05.

Results

In adapting the Multidimensional Attitude Towards the Disabled Scale, the following steps have been pursued: asking permission from the scale developers, translation of the scale items from the original language to the target language and retranslation of the same for determining their equivalency, and finally the determination of the validity and reliability of the Turkish form of MAS.

Translation Study

Pursuant to the criteria set by (Savaşır, 1994), it was ensured that the persons engaging in the translation of the scale were fluent in both the source and target languages and that they were well versed in the subject that the scale was related. In this respect, two academicians from the Department of Psychological Counseling and Guidance, who were fluent in both languages and well versed in the subject, were asked to perform the translation studies. For the back-translation of the scale, however, two experts from two different universities –who were fluent in both languages and well informed of the subject- were asked to do the task. In order to compare the equivalency of the items translated back to the source language from the target language and that of the original form, the opinions of an academician at the Department of Psychological Counseling and Guidance and one of the original developers of the scale, Liora Findler, were sought. Following the examination of the back-translation method, each scale item was evaluated and corrected accordingly in line with the opinions submitted by the aforementioned experts. And then, in order to assess the scale clarity and its suitability of the scale to the students, the scale was applied to the fifteen Psychological Counseling and Guidance students at two different universities. After having made the necessary changes in line with the evaluation of such data, the final version of the scale in Turkish language was prepared.

Validity Studies

Construct Validity: Confirmatory factor analysis (CFA) was performed to identify the compatibility of the Turkish version of the MAS to the Turkish context. The CFA is an analysis that aims to study to what extent a predetermined construct based on a theoretical foundation is confirmed by the collected data (Sümer, 2000).

Firstly, item-total correlation and item-factor loading were examined. In this way, items that do not have necessary factor loading and item-total correlation were removed from scale. Thus, two items (15: disgust and 16: alertness) from affections dimension and one item (1: He/she seems to be interesting guy/girl) from cognition sub-dimension were

removed. That is because, these items cannot make any sense in Turkish society and they can have ambiguity. Descriptive statistics, item-total correlation, variance and Cronbach Alpha values are presented at Table 1.

Table 1. Descriptive statistics and item-total correlation analysis of MAS Turkish version

| Factor Name | Item no | Item-total correlation | Mean | Std. Deviation | % of Variance | Cronbach Alpha |
|-------------|---------|------------------------|-------|----------------|---------------|----------------|
| Affection | 1 | .55 | 2.98 | 1.11 | 15.09 | .88 |
| | 2 | .53 | 2.94 | 1.14 | | |
| | 3 | .48 | 3.01 | 1.29 | | |
| | 4 | .43 | 1.79 | 1.15 | | |
| | 5 | .28 | 3.58 | 1.26 | | |
| | 6 | .52 | 3.81 | 1.11 | | |
| | 7 | .48 | 3.70 | 1.16 | | |
| | 8 | .50 | 3.36 | 1.09 | | |
| | 9 | .34 | 2.05 | 1.06 | | |
| | 10 | .40 | 2.05 | 1.10 | | |
| | 11 | .39 | 3.35 | 1.24 | | |
| | 12 | .50 | 2.71 | 1.30 | | |
| | 13 | .47 | 2.58 | 1.32 | | |
| | 14 | .40 | 3.12 | 1.36 | | |
| | Total | | 41.00 | 10.48 | | |
| Cognition | 1 | .35 | 2.32 | 1.13 | 26.18 | .89 |
| | 2 | .47 | 1.80 | .90 | | |
| | 3 | .43 | 1.82 | .84 | | |
| | 4 | .53 | 1.80 | .91 | | |
| | 5 | .35 | 2.02 | .97 | | |
| | 6 | .52 | 1.75 | .94 | | |
| | 7 | .50 | 1.73 | .85 | | |
| | 8 | .52 | 1.51 | .78 | | |
| | 9 | .43 | 1.73 | .85 | | |
| | Total | | 16.47 | 6.03 | | |
| Behavior | 1 | .62 | 1.93 | 1.00 | 7.91 | .84 |
| | 2 | .53 | 1.62 | .92 | | |
| | 3 | .49 | 1.92 | 1.09 | | |
| | 4 | .21 | 2.76 | 1.21 | | |
| | 5 | .56 | 1.87 | 1.13 | | |
| | 6 | .40 | 1.34 | .71 | | |
| | 7 | .35 | 2.10 | 1.04 | | |
| | 8 | .40 | 2.02 | 1.00 | | |
| | Total | | 15.55 | 5.61 | | |
| Total Scale | | | 73.04 | 16.45 | 49.19 | .90 |

As it can be seen at Table 1, the number of items of MAS Turkish form was reduced to 31 items, unlike original form with 34 items. Item-total correlations of the new form vary from .21 to .56. First dimension of the scale accounts for 26.18 % variance, second dimension accounts for 15.09 % variance; third dimension accounts for 7.91 % variance and total scale accounts for 49.19 % variance.

Büyüköztürk et. al (2004) suggest that each of fit indices have strong and weak side in evaluating the compatibility between a theoretical model and the real data and thus a number of fit indices should be used in order to present accurately the compatibility of the model. The most frequently used fit indices are the Chi-Square Fit Test, Goodness Fit Index (GFI), Comparative Fit Index (CFI), Normalized Fit Index (IFI), and the Root Mean Square Error of Approximation (RMSEA). The acceptable fit values for the GFI, CFI, IFI indices are acknowledged as 0.90 (Bentler & Bonett, 1980; Bentler, 1980; Marsh, Hau, Artelt, Baumert and Peschar, 2006). For the RMSEA, the acceptable fit value is acknowledged as 0.08 (Brown and Cudeck, 1993). The results of the confirmatory factor analysis of MAS Turkish form are presented in the Table 2.

Table 2. Evaluation of the Confirmatory Factor Analysis

| Index | Acceptable fit (Tabachnick & Fidell, 2001) | Sample statistic |
|--------------------|--|----------------------|
| X ² | $0 \leq X^2 \leq 2df$ | $650.5 \leq 838$ |
| P value | $0.05 \leq p \leq 1.00$ | 0.00 |
| X ² /df | $0 \leq X^2 / df \leq 2$ | $0 \leq 1.55 \leq 2$ |
| RMSEA | $0 \leq RMSEA \leq 0.08$ | 0.05 |
| IFI | $0.90 \leq NFI \leq 1.00$ | 0.91 |
| CFI | $0.90 \leq CFI \leq 1.00$ | 0.91 |
| GFI | $0.90 \leq GFI \leq 1.00$ | 0.80 |

Chi-square: 650.5, df:419

The fit indices for the model were examined and the Minimum Chi-Square value was found to be statistically significant ($\chi^2= 650.5$, $N=165$, $p \leq 0.05$). The values of the remaining fit indices were found as follows: $RMSEA=0.05$, $CFI=0.91$, $GFI=0.80$ and $IFI= 0.91$. Based on the aforementioned fit indices values, the model can be considered to be compatible. The Path Diagram regarding the model is also presented in the Figure 1.

Since the scale has three dimensions, a Pearson Moments Correlations analysis was performed to establish the relationship between the dimensions. As a result of the analysis, the highest relationship was found between behavior and cognition ($r = .50$, $p \leq 0.01$), which was followed by behavior and affection ($r = .36$, $p \leq 0.01$) and followed by cognition and affection ($r = .20$, $p \leq 0.05$).

Three paired t-test analyses were conducted to compare the means of the scale dimensions. In this way, it can be proved that dimensions of the scale are related, but they are different from each other. The results of the analyses were found as follows: t (affection-cognition) = 24.44, $df = 164$, $p < 0.001$; t (affection-behavior) = 29.38, $df = 164$, $p < 0.001$ and t (cognition-behavior) = 4.93, $df = 164$, $p < 0.001$.

Concurrent Validity: In order to examine the concurrent validity of the Turkish form of the MAS, the Attitude Towards the Disabled Scale (Dökmen, 2000) was applied to one hundred sixty five university students. Each dimension of the MAS was subjected to the Pearson Correlations analysis separately along with the Attitude Towards the Disabled Scale. As a result of the analysis, it was revealed that there was a positively relationship between the Attitude Towards the Disabled Scale (Dökmen, 2000) and the Emotion sub-dimension of the MAS ($r = .11$, $p > 0.05$), and a positively significant relationship between the former scale and the Cognition sub-dimension ($r = .50$, $p < 0.01$), and a positively significant relationship between the former scale and the Behavior sub-dimension ($r = .36$, $p < 0.01$), and a positively significant relationship between the former scale and total score of the MAS ($r = .38$, $p < 0.01$).

Comparison Regarding Lower-Upper Group Averages: For the purpose of examining the MAS's capacity to distinguish people in terms of the characteristics it has been designed to measure, a comparison of the

group average scores -determined based on the difference between the lower 27% and upper 27% group averages identified as per the total scores of each dimension of the scale- has been made. This analysis allows researchers to establish the scale's ability to distinguish those who have a positive attitude towards the characteristic that is being measured from those who have a negative attitude towards the same (Erkuş, 2005; Tezbaşaran, 1996).

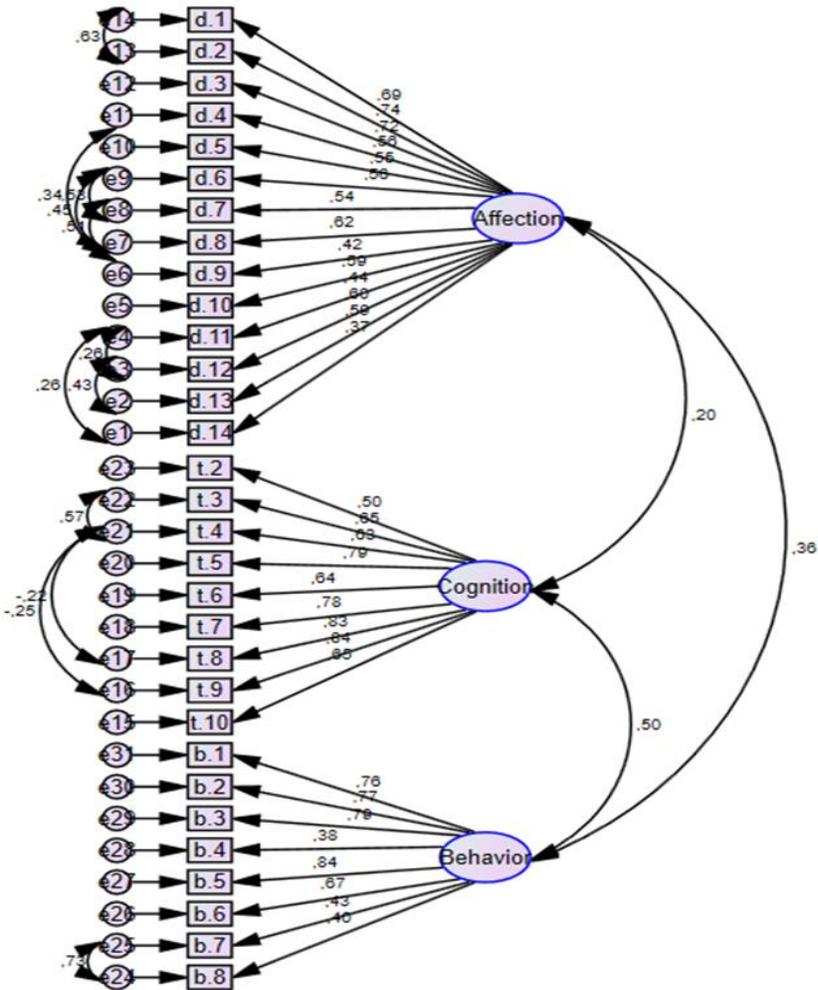


Figure 1: Factor Structure of MAS Turkish version

In this respect, the scale was applied to 165 students from various universities. The attitude scores of students towards people with disability were listed from the highest to the lowest. Lastly, the threshold groups of lower 27% and upper 27% were formed based on the listing of the student scores from the highest to the lowest. A t-test analysis was performed to identify whether there was a significant difference between the threshold groups of upper %27 and lower 27% scores calculated through the scale. As a result of the analysis, a significant difference was established between groups for affection dimension [$t(165)=-26.64$, $p<.05$]; for cognition dimension [$t(165)=-13.55$, $p<.05$]; for behavior dimension [$t(165)=-13.60$, $p<.05$]; and for total scale scores [$t(165)=-40.95$, $p<.05$].

Reliability Studies

Test-retest Reliability: With the aim of examining the stability of MAS, test-retest analysis was conducted. In this way, thirty-five university students were randomly selected at a course. Turkish form of MAS was carried out by voluntary students. The questionnaire was conducted twice with in an interval of four weeks. The correlation coefficient analysis was performed to examine the relationship between two applications. At the end of analysis, it was found that the correlation coefficient is .57 for affection, .64 for cognition and .56 for behavior sub-dimensions ($p<.05$).

Internal Consistency Coefficient: In order to determine the reliability of the Turkish form of the Multidimensional Attitude Towards People with Disability Scale, an Alpha (α) coefficient was calculated. In calculating the α coefficient, the variances of the test items are divided by the variances of the total scores, which reveals the degree of consistency of the test items with total scale (Baykul, 2000; Büyüköztürk, 2013). For the purposes of measuring the consistency of the items of this scale, the scale was applied to one hundred sixty five students from the various departments of different universities. As a result of the analysis, the reliability coefficient for the entire scale was found as $\alpha= 0.90$, the reliability

coefficient for the affection dimension as $\alpha= 0.88$, for the cognition dimension as $\alpha= 0.89$ and for the behavior dimension as $\alpha= 0.84$ (Table.1).

Discussion and Conclusion

The present study is involved in the translation of the scale items of MAS from the original language to the target language as well as the validity and reliability studies of the Turkish version. The items of original and Turkish versions were evaluated by the experts; they concluded both scales had similar statements.

Once the translation work was accepted, the validity and reliability studies of the Turkish version were performed with the participation of one hundred sixty five university students. As part of the validity study, firstly item-total correlation and item-factor loading were explored. Three items that do not have sufficient item-total correlation were removed from scale. Later, a confirmatory factor analysis was performed to assess factor of the scale in the Turkish context. As a result of the analysis, the Turkish version of the Multidimensional Attitude Towards the Disabled Scale was also found to be three factor-structure as the original scale. Such identified factors were named as Affection, Cognition and Behavior in line with their respective characteristics as do original scale has.

The fit statistics in the confirmatory factor analysis were found as $X^2 = 605.5$, $df= 419$. Such fit indices are used to determine whether the scale model will be accepted or not (Şimşek, 2007). Based on the fact that the value in the degree of freedom (df) part of the Chi-square value, being one of the aforementioned fit indices, is less than 2 ($X^2/df = 1.55$), it can be argued that the scale model is a good one. It was seen that the Turkish version of the scale had the same structure as the original version, but it has thirty-one items and thus the scale structure was confirmed.

The relationships between the dimensions and the difference between the scores within the Turkish version of the scale were examined. It was established that each dimension of the scale had a positively significant relationship with one another and that there was a statistically significant difference between the total dimension score averages. As a result

of this analysis, it can be argued that while the dimensions of the scale had a common issue, they also represented different aspects.

For the concurrent validity study, the Attitude Towards the Disabled Scale, developed by Dökmen (2000), was used. Since the said scale was a single dimensional one, each dimension of MAS was compared separately and by using the total scale scores. It was established that there was a positively significant relationship between the Attitude Towards the Disabled Scale and every dimension of the multidimensional scale including the total scale scores. In the light of aforesaid, it can be argued that the scale in question is capable of measuring the attitudes towards people with disability in multidimensional way.

In order to determine the degree of distinguishability of the Turkish version of the MAS in terms of the characteristic that it is designed to measure, an analysis was performed based on the difference between the lower and upper threshold group averages of 27%. It was established that there was a statistically significant difference between the lower and upper threshold group averages of 27% in every dimension of the scale as well as the total scale scores. As a result of the analyses, it was established that the Turkish version of the scale was capable of distinguishing the persons in terms of their negative or positive attitude towards people with disability. Through test-retest correlation analysis of MAS conducted twice with in an interval of four weeks, it was established that the MAS is stable scale in order to measure people attitudes toward people with disability.

The internal consistency coefficient for the entire Turkish version of the Multidimensional Attitude Towards the Disabled Scale was found as $\alpha = 0.90$, the reliability coefficient for the Affection dimension as $\alpha = 0.88$, the reliability coefficient for the Cognition dimension as $\alpha = 0.89$ and the reliability coefficient for the Behavior dimension as $\alpha = 0.84$. In the original version of the scale, however, the internal consistency coefficient was not observed, and the coefficient for the affection dimension was found as $\alpha = 0.90$, the reliability coefficient for the cognition dimension as $\alpha = 0.88$ and the reliability coefficient for the behavior dimension as $\alpha = 0.83$ (Findler, Vilchinsky & Werner, 2007). It can be argued that the values in the Turkish version of the scale are found to be of ideal values

specified in the literature (Erkuş, 2005; Creswell, 2005; Field, 2005) and thus it has the ideal reliability values.

As a result of the analyses, it can be argued that the Turkish version of the Multidimensional Attitude Towards the Disabled Scale is a valid and reliable scale in terms of determining individuals' attitudes towards people with disability. this scale will be of help to those who wish to study the attitude towards people with disability.

It can be suggested that individual may provide partial answers in the studies conducted on measuring the attitudes towards the disabled due to social desirability. It can be argued that this scale may help to avoid social desirability because it involves indirect measurement through story telling. The scale is thought to contribute to the research to determine the factors that may be related to attitudes towards disabled people. This scale can be used especially by teachers, counselors, social worker to determine their attitudes and everybody who study about disability.

There are some areas of adaptation of MAS to develop. Since the adaptation studies on this scale were exclusively conducted on university students and limited sample group. Its field of application may be broadened by conducting further validity and reliability studies on people of various different age and social groups. Moreover, the reliability and validity studies for this scale may be performed once again by working on a wider sample group.

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