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Myths Related to Childhood Sexual Abuse and Gender Equality

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Abstract

Child sexual abuse (CSA) is an important social problem observed in the world in general. This study initially aimed to identify whether the Gender Equality Scale was a valid and reliable measurement device for use in adult individuals. To this aim, validity and reliability studies for the Gender Equality Scale were performed with 353 adults reached though an online survey. The second aim of the study was to seek an answer to the question of whether gender and gender equality variables significantly predict CSA myths. A total of 769 individuals were reached through online surveys to determine predictors of CSA myths. According to the findings, the Gender Equality Scale was determined to be a valid and reliable tool for use with adults. Moreover, the understanding that men are superior and the understanding that women are dependent on men, which are gender variables, explain 38% of CSA myths, while only the understanding that men are superior significantly predicted CSA myths. Consequently, to reduce the sexism led by the understanding that men are superior, studies can be carried out not only with adults but also with other layers of the society in accordance with the ecological system approach.

Key words: Childhood Sexual Abuse, Gender, Gender Inequality, Sexism, Sexual Abuse Myth

Introduction

Child sexual abuse (CSA) is an important social problem observed in the world in general (Assink et al., 2019; McKibbin & Humphreys, 2020). This problem may lead to negative medical outcomes like early pregnancy and cause a variety of mental disorders like anxiety, depression, and substance abuse (Brunton & Dryer, 2020). Further, if victims do not receive the necessary psychosocial interventions, repeated victimization risks increase and the effect of trauma may continue for many years (Brunton & Dryer, 2020; Koçtürk & Bilge, 2018; Scoglio et al., 2021). At this point, social support-based interventions offered to abuse victims by parents and society may be an important protective factor preventing occurrence of new abuse cases (Koçtürk & Bilge, 2018; Scoglio et al., 2021).

Perceived social support from family and society is not just an intervention to be given to victims after CSA but is a factor which will affect the CSA report process (Alaggia et al., 2019; Koçtürk & Bilge, 2018; Koçtürk & Bilginer, 2020). Some victims explain the events experienced in an easier way and earlier in situations where they feel they will be believed and not blamed (Koçtürk, 2019). However, when victims making later reports explain events, they are blamed by those around them and may be exposed to other negative attitudes and behavior in society (Koçtürk & Bilginer, 2020). For example, a study in Turkey found that CSA victims reported late due to a variety of fears like not wanting to cause problems in the family and stigmatization by society; nearly half of victims stated they met negative attitudes from their social surroundings when they reported their abuse (Koçtürk & Bilginer, 2020). In the literature related to this, it was emphasized that the culture of a society and gender inequality will affect the report process of victims and social support levels displayed towards them (Cromer & Freyd, 2007; Jones, 2010; Koçtürk & Bilginer, 2020).

Gender Equality

Gender equality represents women and men being equally valued without regard to gender and having equal chances and opportunities in access to social, economic, and political resources in life (World Health Organization; WHO, 2008). The common attitudes in society seeing women as not having equal place with men and elevating masculinity are considered to be a violation of human rights (WHO, 2011); this indirectly offers a background where victims are blamed for men engaging in CSA behavior (Cromer & Freyd, 2007). A sexist belief like “adolescent girls wearing revealing clothing want to be sexually abused” may be given as an example of this situation (Chim et al., 2020). With the emergence and support of sexist statements, CSA myths present

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among individuals and society are noted in the literature (Brown et al., 2001; Koçtürk & Kızıldağ, 2018). As is known, myths are unrealistic beliefs about a certain topic, and are mistaken or excessively generalized beliefs preventing the necessary interventions like obstructing the field of child protection and preventing the truth being revealed by denying the existence of abuse (Brown et al., 2001; Ferragut et al., 2020; Sawrikar, 2020). When previous studies are investigated, CSA myths were determined to vary linked to individual factors like gender and educational level (Ferragut et al., 2020). For example, a study in Spain identified that women and individuals with high educational level believed lower rates of CSA myths (Ferragut et al., 2020). At the same time, the research revealed that individuals had more stereotypes about the prevalence of CSA, characteristics of victims, and preventive work such as getting sex education.

As understood from the above explanations and examples, CSA myths are fed by the cultural structure of a society and may be affected by the cultural structure. Sawrikar (2020) reported that individuals in collectivist societies where sexuality is taboo may believe more CSA myths and may blame victims more. Boakye (2009) stated that normalizing or trivializing sexual abuse behaviors may increase the probability of feeding these negative behaviors, noting certain beliefs and perceptions in patriarchal structures, especially, form the basis of some negative behaviors. For example, Chim et al. (2020) identified that there was a high correlation between CSA and being a man. In other words, CSA myths increase by the degree to which sexism is at high levels. In relation to this, Sawrikar (2020) stated that the risk of blaming the victim in collectivist societies emerged due to social norms forbidding discussion of any sexual topic including harassment to protect the purity of women, honor of men and hence family reputation. This situation may prevent dealing with the topic of abuse, including even mentioning it. Therefore, it can be said that CSA myths indirectly tends to maintain and facilitate gender inequality.

Contrary to the importance of CSA myths and sexism mentioned above in the literature, there is no study investigating the CSA myth levels and attitudes toward gender equality of adults in Turkey, displaying different cultural features than Western Society. Further, there are limited studies about CSA myths and the need for new research is emphasized in the literature (Koçtürk & Kızıldağ, 2018; Koçtürk & Kızıldağ-Şahin, 2021). From an ecological aspect (Bronfenbrenner, 1979), considering that CSA myths believed by individuals may be affected by cultural factors, assessment of CSA myths in a patriarchal society like Turkey (Erdoğan, 2016; Ozdemir-Sarigil & Sarigil, 2021) will form the basis of prevention studies. In fact, the importance of the ecologic system approach for prevention of CSA, involving a variety of individual, familial and social risk factors, was mentioned in the literature (Assink et al., 2019; Grauerholz, 2000; Mathews & Collin-Vézina, 2016). When CSA is dealt with according to the ecologic system approach, many factors like myths present in society (Koçtürk & Kızıldağ, 2018), legal regulations, gender inequality, and effective operation of child protection systems are factors that affect prevention of CSA and intervention against CSA (Grauerholz, 2000; Koçtürk, 2019). For example, there may be myths in society about divorced parents making unrealistic claims about abuse (Brown et al., 2001). With the presence of these myths, necessary interventions may not be offered considering that the report by the child or parent is unrealistic.

Just as assessment of CSA myths in Turkey will guide prevention studies, it will present information about Turkey to the international literature. In fact, Sawrikar (2020) emphasized that there were more CSA myths in eastern cultures and that there was a need to assess cultures in terms of CSA myths in a study assessing results obtained in South Korea, South Africa, and Switzerland. However, considering abusers know social values and social factors very well, and that they may plan a process of deceiving CSA victims (Craven et al., 2006), it is important to eliminate the lack of knowledge in society and determine needs at the social level in terms of preventing the occurrence of crime. Brown et al. (2001) mentioned the importance of experts providing services related to children and abuse accusations using real scientific information instead of myths. In conclusion, considering that the basic group served by psychological counselors are children and families, there is a requirement to determine needs related to this topic, to see the whole picture in society and to reveal factors predicting CSA myths for effective planning of prevention studies. Moving from this point, the basic aim of this study was to determine whether gender equality and gender predicted CSA myths or not. However, a scale assessing the perspective on gender equality of adults in the context of the “understanding that considers men superior” and the “understanding that sees women as dependent on men” was accessed in the literature (Gender Equality Scale / Toplumsal Cinsiyet Eşitliği Ölçeği; Gözütok et al., 2017; Toraman & Özen, 2019). It was identified that this scale did not assess the psychometric features of individuals in adulthood. Moving from this point, the research sought answers to the following questions:

a. Is the Gender Equality Scale a valid and reliable scale tool for use with adult individuals?

b. Do the variables of gender and gender equality (understanding that men are superior and understanding that women are dependent on men) significantly predict CSA myths?

Method

Participants

A descriptive model was used in this study, in which the validity and reliability studies of the Gender Equality Scale were carried out with adults and the predictors of CSA myths were investigated. This study also used the convenient sampling method ensuring easy access to many people at the same time with economic benefits (Alvi, 2016). This research performed the analyses on two different study groups. Information related to both study groups are presented below.

Study Group I

Validity and reliability studies for the Gender Equality Scale were performed with 353 adults reached though an online survey. The demographic information for adults is included in Table 1.

Table 1. Demographic information of participants in Study Group I

Variable		*f*	%
Gender	Woman	290	82.2
	Man	63	17.8
Marital status	Married	330	93.5
	Divorced	23	6.5
Number of children	1	145	41.1
	2	177	50.1
	3	27	7.6
	4	3	.8
	5	1	.3
Living place	Village	2	.6
	District	75	21.2
	Province	276	78.2
Willingness to be educated about sexual abuse	Yes	314	89
	No	39	11

N = 353

When Table 1 is investigated, most participants were women (82.2%, *n* = 290), married (93.5%, *n* = 330) and resided in provincial towns (78.2%, *n* = 276). Additionally, most participants had a single child (41.1%, *n* = 145) or two children (50.1%, *n* = 177). Finally, 314 participants (89%) were willing to receive education about CSA, while 39 (11%) did not want to receive education about this topic.

Study Group II

A total of 769 individuals were reached through to determine predictors of CSA myths. Information related to the study group is presented in Table 2.

Table 2. Demographic information of participants in Study Group II

Variable		*f*	%
Gender	Woman	622	80.9
	Man	147	19.1
Marital status	Married	499	64.9
	Divorced	70	9.1
	Single	200	26.0
Living place	Village	14	1.8
	District	163	21.2
	Province	592	77.0
Level of education	Undergraduate education	646	84
	Under undergraduate education	123	16
Training status on CAN	Yes	169	22
	No	600	78
Institutions or resources trained for CAN	Ministry of Education	74	9.6
	University	36	4.7
	Health institution	28	3.6
	Justice institution	18	2.3
	Internet	5	0.7

	Ministry of Family, Labor and Social Policies	2	0.3

Note. N = 769; CAN = Child abuse and neglect.

As can be seen from Table 2, most adults participating in this research were women (80.9%, *n* = 622), married (64.9%, *n* = 499) and resided in provincial towns (77%, *n* =592). The majority of participants had education up to undergraduate level (84%, *n* = 646). At the same time, 78% of participants (*n* = 600) had not received education about CSA, while participants receiving education had mainly received this from the Ministry of National Education (9.6%, *n* = 74). With this information, the average age of the participants is 37.11 (sd=10.04).

Data collection tools

Personal Information Form

This form was prepared by the researchers in order to collect information about the gender, marital status, number of children, place of residence, educational level, desire to receive education about CSA, organization where CSA education was received and resources of participants.

Gender Equality Scale

This scale was developed by Gözütok et al. (2017) to determine the opinions of high school students' gender equality. The scale comprises 13 items with two subdimensions of "understanding that men are superior" and "understanding that women are dependent". The 5-point Likert rating (*definitely disagree, disagree, partly agree, agree and definitely agree*) scale does not give total points and does not contain items with inverse points. The subdimension point interval for "understanding that men are superior" is 8-40, while the subdimension point interval for "understanding that women are dependent on men" is 5-25. High points obtained from the understanding that men are superior subdimension means acceptance of men being superior to women and male dominance; high points obtained for the understanding that women are dependent on men subdimension means opinions related to women being dependent on men in family relationships and women requiring permission from men to act (Gözütok et al., 2017). Reliability studies for the form of the scale developed for high school students found internal consistency coefficient of .88 for the first subdimension and .70 for the second subdimension. Confirmatory factor analysis studies performed within the scope of validity studies observed the scale had significant and perfect level for fit index values (X^2 =97.01, sd = 53, p = .00, X^2/206 = 1.83; RMSEA = .084, SRMR = .07, RMR = .06, NFI = .91, NNFI = .94, CFI = .99, IFI = .99, AGFI = .92; Gözütok et al., 2017). Within the scope of this study, the internal consistency coefficient for the understanding of male superiority subdimension was .86, while the internal consistency coefficient for the understanding of women's dependence on men subdimension was .77.

Childhood Sexual Abuse Myths Scale (CSAMS)

The scale was developed by Koçtürk and Kızıldağ (2018) with the aim of measuring CSA myths among university students. Later, validity and reliability studies for adult individuals were performed by Koçtürk and Kızıldağ-Şahin (2021). Both forms of the scale contain 22 items and two factors of "reports and reliability" and "abuser features". The 5-point Likert scale (1 = *completely disagree,* 2 = *disagree,* 3 = *undecided,* 4 = *partly agree* and 5 = *completely agree*) has total points and the points interval varies from 22 to 110. High points obtained from the scale indicates that university students believe high levels of CSA myths. Within the scope of reliability studies for the scale, the internal consistency coefficients, and test-retest reliability was investigated. The internal consistency coefficients for the dimensions were .84 and .85, with value of .90 for the whole scale. For test-retest reliability, the corrected correlation coefficients were .93 for the report and reliability dimension and .89 for the abuser features dimension. Confirmatory factor analysis results within the scope of validity studies for university students observed the scale had significant and acceptable values for fit indices (X^2 = 511.73, sd = 206, p = .00, X^2/206 = 2.484; RMSEA = .084, SRMR = .07, RMR = .06, NFI = .91, NNFI = .94, CFI = .95, IFI = .95, RFI = .90, AGFI = .80, GFI = .84; Koçtürk & Kızıldağ-Şahin, 2018). At the same time, confirmatory factor analysis results were performed in validity studies for adults (X^2_{419} = 851,767, p = .00, Normed x^2 = 4.22; CFI = .93; NFI = .92; RFI = .90; IFI = .93; TLI = .92; RMSEA = .08 SRMR = .04; Koçtürk & Kızıldağ-Şahin, 2021). It was seen that these values are at an acceptable level. Within the scope of reliability studies for the adult form, the internal consistency coefficient for the whole scale was .97. Within the scope of this study, the internal consistency coefficient for the whole scale was identified as .94.

Analysis of Data and Procedure

For implementation of this research, necessary permissions were obtained from the Non-Interventional Clinical Research Ethics Committee of the university where one of the researcher's is employed. After ethics committee

permission, data collection tools were uploaded to "Google Forms" and then the study was announced by the researchers in the online environment. Before seeing the scales, the participants were informed about the research with the online form and their consent was obtained online. Participants who consented to participate in the study were able to see the scales.

This study firstly performed confirmatory factor analysis for 353 adults included in Study Group I. Before confirmatory factor analysis can be performed within the scope of validity studies, measurements must be reviewed for normality, multiple collinearities, outlier values and missing data (Kline, 2010). Analysis is begun after ensuring that the data meet these assumptions. At the same time, internal consistency coefficients were investigated for reliability of the scales. As measurements used online surveys where answers were provided one-by-one without progression unless answered, there was no missing data. Additionally, the skewness and kurtosis values for item points were assessed with a linearity scatter plot for the normality assumption. Outlier values were investigated with the Mahalanobis distance test for outlier values of linear components. As a result of investigations, data met the assumptions for analysis. Analysis of data used the AMOS 26 and SPSS 26 programs. The error share in the research was taken as .05.

At the same time, this research performed regression analysis on data obtained with online surveys of 769 adults in Study Group II. Participants in the research were presented with an informed consent form and data from all participants who accepted participation in the study were analyzed. Analysis of data used SPSS 26. In this stage, tests were performed to see whether statistical assumptions for regression analysis were met or not. The data in the research were investigated with skewness and kurtosis values for fit to normal distribution and all variables included in the analysis were observed to have values between 1.35 and -.60. As the investigated skewness and kurtosis coefficients were in the interval between -2 and +2 (Tabachnick & Fidell, 2007), the data was shown to have normal distribution. Within the scope of preliminary analyses performed for data analysis, normality, linearity, multiple collinearity and equivalent variance assumptions were tested. The Durbin-Watson value was investigated for autocorrelation between variables (maximum value .33, <4), so it was concluded there was no autocorrelation between variables (Yavuz, 2009). At the same time, tolerance, and variance inflation values (maximum = 1.79, <5) were examined and the assumptions for variance analysis were investigated. Also, the gender variable was assigned as a dummy variable in the regression analysis.

Findings

The findings of the study are presented under two headings according to the sub-problems of the study.

a. Validity and Reliability Study for Gender Equality Scale

Confirmatory Factor Analysis Findings

Confirmatory factor analysis and validity analysis were investigated to apply the Gender Equality Scale to adults. Results related to the analyses are given in Figure 1.

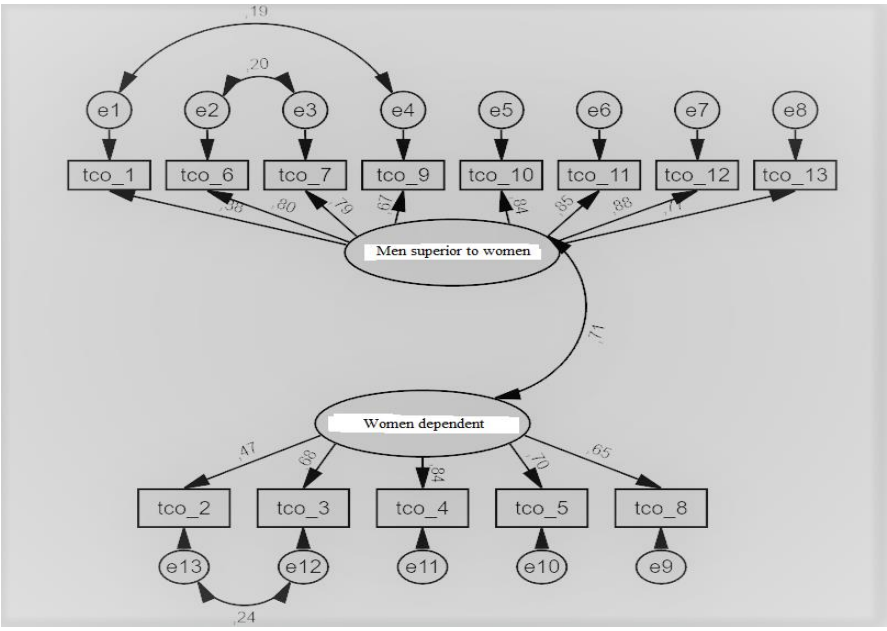

Figure 1. *SGES confirmatory factor analysis results*

As seen on Figure 1, the standardized regression coefficients for scale items were .39-.87 for the understanding that men are superior, and .51-.83 for the understanding that women are dependent on men. The average variance explained (AVE) by the understanding that men are superior dimension is .58, while the AVE for the understanding that women are dependent is .46. Kline (2010) states that AVE values with weights of .50 and above have large effects. The AVE and CR values are shown. According to Hair et al. (2009), the construct reliability (CR) should be larger than .7. Accordingly, the items included on both dimensions of the scale indicate that the dimensions are valid. At the same time, the CR values related to the dimensions were .92 for the 'men are superior' dimension and .81 for 'women are dependent' dimension. Thus, these values show the scale meets the similitude validity condition. In conclusion, the general fit coefficients for the model show the hypothesis model has acceptable levels of fit ($_{53}$ X^2_{353}= 245.008 p = .00, Normed x^2 = 4.01; CFI = .93; NFI = .91; RFI = .86; IFI = .93; TLI = .91; RMSEA = .08; SRMR = .08). Acceptable goodness of fit is shown if the X^2 / df value is 3 or smaller (Kline, 2011); if RMSEA and SRMR values are below .08 (Byrne, 2010); and if IFI and CFI are .90 and above (Bentler, 1990). For this reason, these values prove the coefficients related to the model are adequate.

Reliability Study

As a result of the reliability study for the scale, the item-total correlation coefficients for the 'understanding that men are superior dimension' were .37 -.80, with internal consistency coefficient of .89. For the 'understanding that women are dependent on men dimension' of the scale, the item-total correlation coefficients were .50 - .69, with internal consistency coefficient of .79. The internal consistency coefficient for the whole scale (stratified alpha) was found to be .90.

b. Prediction of Childhood Sexual Abuse Myths

Table 3 presents the correlation values for dependent and independent variables. Accordingly, for CSA myths, there was a positive correlation with understanding that men are superior (r = .62, p = .001); a positive correlation with understanding that women are dependent (r = .43, p = .001); and a positive correlation with gender (r =.15, p = .001). For the understanding that men are superior, there was a positive correlation with the understanding that women are dependent (r = .66, p = .001) and with gender (r = .25, p = .001). Finally, for the understanding that women are dependent to men, there was a positive correlation with gender (r = .23, p = .001). The value of this correlation (from .15 to .66) appeared to be at low levels (0.30-0.00 low, 0.70-0.30 moderate and 0.70-1.00 high; Büyüköztürk, 2007). Additionally, the regression analysis for correlations between variables can be said to have acceptable values.

Table 3. Pearson correlation coefficients for dependent and independent variables

Variable	1	2	3	4	X̄	SD
1. Childhood sexual abuse myths	1				27.95	7.68
2. Understanding that considers men superior to women	.617**	1			10.30	3.11
3. Understanding that considers women dependent	.431**	.655**	1		8.30	2.88
4. Gender	.149**	.252**	.227**	1	1.19	.39

Note. ***p* = .001

Table 4. Findings concerning the prediction of childhood sexual abuse myths

Predictive variables	R	R^2	ΔR^2	β	*t*	F
Constant	.62	.38	.38		13.24*	157.40
Understanding that considers men superior to women				.59	15.45*	
Understanding that considers women dependent				.05	1.29	
Gender				-.01	-.34	

Note. **p* < .05

As seen from Table 4, the variables ofunderstanding that men are superior explained 38% of the CSA myths. The results of the analysis identified that the understanding that men are superior significantly predicted

CSA myths, while the understanding that women are dependent on men and the gender variable were not identified to significantly predict CSA myths.

Results and Discussion

In this study which performed validity and reliability studies for the Gender Equality Scale used for adults and investigated predictors of CSA myths, firstly the Gender Equality Scale was determined to be a valid and reliable tool for use with adults. As is known, confirmatory factor analysis studies include a variety of statistical values indicating the fit of the model to data, with values like RMSEA, CFI, NNFI and GFI generally noted in the assessment of data fit to the model (Kline, 2010). This study obtained values of chi square$_{353}$ = 245.008, p = .00; Normed x^2 = 4.01; CFI = .93; NFI = .91; RFI = .86; IFI = .93; TLI = .91; RMSEA = .08 and SRMR = .08 as a result of testing the two-factor model of the scale structure. For this reason, these values count as evidence that the coefficients related to the model are adequate and show the scale structure was confirmed (Kline, 2010). Additionally, analysis results show the 13 items included on the scale have construct validity in the adult sample, similar to the adolescent sample (Gözütok et al., 2017). Hence, all items on the scale were within acceptable limits for the subscales. The items had t values from .15 to .77 and the multiple correlation square values varied from .38 to .88 and all values were significant. Additionally, it is expected in the literature that the calculated internal consistency value will be .70 and above for a scale to be accepted as having high levels of reliability (Tavşancıl, 2002). The internal consistency coefficient for the reliability coefficients for the 13 items on the scale was .90 for the whole scale, indicating the scale met this criterion.

Another important contribution of this study to the literature is the investigation of gender equality as predictors of CSA myths. According to findings, the variables of gender, the understanding that men are superior and the understanding that women are dependent on men explain 38% of the CSA myths, while only the understanding that men are superior significantly predicted CSA myths. Some studies in the literature stated that men believe more CSA myths (DiDonato, 2017), while some studies stated that there is no difference between genders according to the features of CSA myths and education level of participants (Ferragut et al., 2020). Considering the majority of participants included in this study were women and that male participants had high educational levels, the reason for the lack of difference between genders may be due to the sociocultural features of the sample. In other words, the reason for the differences in findings between studies in the literature may be caused by differences linked to confounding/mediating effects of educational level. In fact, in the literature is it known that men believe more CSA myths and CSA myths reduce as educational level increases (e.g., DiDonato, 2017). However, Cengiz (2020) emphasized there was a correlation between narcissism levels in adults and sexist attitudes. Narcissism and similar personality traits may cause inconsistency between results, like educational level. However, in order to make more accurate interpretations about this topic, studies investigating the mediating role of factors like education, etc. according to type of CSA myths (toward the victim, abuser, specific to the event) in the relationship between gender and CSA myths should be performed.

In this study, the understanding that men are superior was identified to significantly predict CSA myths, while the understanding that women are dependent on men was not identified to be a predictor. As is known, sexism may be seen in two basic forms of hostile and protective sexism (Cengiz, 2020; Glick & Fiske, 2001). While the understanding that men are superior may be the most obvious and visible face of sexism, society may be inured to protective sexism with cultural values in Turkish society and the understanding that women are dependent on men may be more normalized culturally. For this reason, though adults may believe CSA myths at low levels, they may see women as dependent on men. In fact, studies completed in Turkey state that women adopt protective sexism like men (Cengiz, 2020) and women have a role in maintaining gender roles and preventing equality (e.g., Özkan, 2014). Another reason for the lack of prediction of CSA myths by the understanding that women are dependent on men may be related to the perception of a range of legal implementations about female-male equality in Turkey and the place of women in society. As is known, Turkey is 130 out of 153 countries in terms of gender equality (World Economic Forum, 2020). Participants may see women in society as in a position that is dependent on men due to their own experiences and the present conditions. In fact, the literature states that women remain in the background compared to men in many areas like domestically, in the career world and media, and positive discrimination in these areas was mentioned to ensure equality (Dedeoğlu, 2009; Demirdirek & Şener, 2014; Kavas, 2018). Further, even women with high educational level are known to be exposed to gender inequality in Turkey (Halifeoğlu, 2020; Suğur & Cangöz, 2016). In this study, considering the majority of participants were women with high educational level, the presence of the understanding that women are dependent on men within this group may be an indicator of how important studies on this topic are in terms of sustaining gender inequality. However, as this research was a descriptive study, causative studies may be completed about the understanding that women are dependent on men to make a clearer interpretation.

This study has some limitations. First, the study is cross-sectional. Secondly, data were collected online which may be considered another limitation of the study. While online collection of data ensures many people displaying different cultural characteristics are reached, it prevents access to adults without mobile telephones or internet access. Additionally, since the majority of the research participants are women, university educated, living in the province and married, the results can be evaluated in the context of these participant characteristics. Finally, the study did not make a detailed definition about CSA types and subjective assessment of CSA by participants may be considered a limitation of the study (Ferragut et al., 2020).

Conclusion and Recommendations

Along with the limitations mentioned above, this study includes participants from many locations in Turkey and provides a variety of contributions to the literature with this broad sample. Based on the findings obtained in the study, educational studies may be completed for adults with the understanding that men are superior. Contrary to this, in light of information in the literature, it may be assumed that these adults may ignore possible CSA situations, may not receive support from the relevant areas and may blame the victim. Additionally, studies may be completed in accordance with the ecologic system approach (Bronfenbrenner, 1979; Grauerholz, 2000) with other layers in society, not just adults, in order to reduce sexism led by the understanding that men are superior. The media may be an important factor in the formation and continuation of CSA myths (Popović, 2017) and considering the power of the media should not be underestimated in gender inequality or roles (Doğan, 2020; Karanfil, 2019), organizations related to the media may be used to inform the public. Additionally, organizations and studies about the media may be given weight in reducing these interrelated problems. Also, data obtained in new studies completed with individuals from different cultural backgrounds may test the validity for these groups. Finally, considering its relationship with sexism and CSA myths, trainings that reduce sexism and myths can be provided in groups serving CSA victims, and gender equality issues can be added to the program in parent trainings.

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Overcoming the Obstacles of Peace Education through Wellbeing Practices

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Overcoming the Obstacles of Peace Education through Wellbeing Practices

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Abstract

A growing body of literature reports structural, cultural, social, and political barriers making it challenging and stressful to integrate peace education in teacher education and in-service teacher education programs. To support peace educators in achieving what they stand for, this study proposes integrating wellbeing practices and approaches into the curricula. Drawing from the fields of peace education, educational leadership and policy studies and higher education, this study examines wellbeing as a potentially promising scholarly field to support peace education scholarship. For happiness and life satisfaction, wellbeing links a person's physical, mental, emotional and social health factors not just to internal factors such as optimism, resilience and self-esteem but also external factors such as income, satisfaction at work and social networks. In order to explore the ways wellbeing can contribute to peace education, we first expand on peace education as a controversial and challenging practice especially for practitioners in the field. Next, we discuss wellbeing practices as they relate to educational settings. Finally, we discuss that peace educators can be supported by wellbeing practices to overcome the degrading and demotivating effects of their practices.

Key words: Peace education, higher education, wellbeing, teacher training, pedagogy.

Introduction

Formal schooling is portrayed with a unique potential in transforming present violent realities and inequalities into peaceful and just social orders (Bajaj, 2008; Bickmore, 2011; Flinders, 2005, 2006; Gursel-Bilgin, 2016; 2020a;2020b; 2021; Hutchinson & Herborn, 2012; Noddings, 2012) On the other hand, there is a growing body of literature reporting structural, cultural, social, and political barriers making it challenging, if not impossible, to integrate peace education in teacher education and in-service teacher education programs (Bekerman & Zembylas, 2014; Burnley, 2003; Cook, 2014; Harris & Morrison, 2003; Horsley, et al., 2005; McLean, et al., 2008; Wang, 2018) Within such a challenging and discouraging context, teachers interested in practicing peace education are under particular stress and pressure (Burnley, 2003; Horsley, et al., 2005).

Drawing from the fields of peace education and educational leadership and policy studies and higher education, this study examines wellbeing as a potentially promising scholarly field to support peace education scholarship. It is guided by the question: What offerings do wellbeing present in order to contribute to peace education? Below, we expand on peace education as a controversial and challenging practice especially for practitioners in the field. We also discuss that peace educators need to be supported by wellbeing practices to overcome the degrading and demotivPating effects of their peace education practices.

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Peace education as a challenging practice

Education and peace are perceived to be inherently interconnected (Danesh, 2007; Trifonas & Wright, 2011), and peace education is presumed to be integrally incorporated in teacher education programs (Brantmeier, 2010; Bekerman & Zembylas, 2014). However, a large volume of literature underlines the opposite in reality for both teacher education programs and practicing teachers (Bekerman & Zembylas, 2014). Pre-service teachers are hesitant towards peace education as they find peace education stressful and challenging compared to citizenship, environmentalism, and multiculturalism despite their close link with peace education (Burnley, 2003; Cook, 2014; Wang, 2018). Others have found that peace education was perceived to be linked with ethnic movements (Burnley, 2003). Pre-service teachers had limited understanding of peace education and struggled to integrate dimensions of peace education into their practice teaching (Cook, 2014).

Likewise, literature on peace education integration in in-service teacher training reports challenges (Bekerman & Zembylas, 2014; Clarke-Habibi, 2018; Lopes Cardozo & Hoeks, 2015; Zembylas et al., 2016; Zembylas & Bekermanc, 2019; Zembylas & Loukaidis, 2020). For example, peace educators are regarded as communist sympathizers (Burnley, 2003), and unpatriotic and disloyal to their homeland (Horsley, et al., 2005). Such negative perceptions of peace educators and teachers' fear of disapproval by their employers and society discourage teachers from integrating peace education into their teaching (Horsley, et al., 2005). In line with this, McLean, Cook & Crowe (2008) discuss that practicing teachers also had limited understandings of what peace and peace education entails. As a result, their efforts of integrating peace education into their curriculum and teaching often resulted in ineffective lesson planning and practice.

Several psychological, cultural, political, and educational obstacles influence peace educators' perceptions and practices of peace education (Harris & Morrison, 2003). One critical example is the case of the Peace Teacher, who lost her job and home in the state in the aftermath of her only statement "I honk for peace" when asked by one of her elementary school students about her opinion about the war in Iraq. As result of the complaint of one of the parents, apart from losing her job and home, she had to go through several court cases, including federal courts, that ruled she had no right of free speech, only a commodity to sell to her employer, the public school. This study is crucial because it scrutinizes the missions and functions of public schooling within the society and shows how it can operate in support of power inequalities. Furthermore, the study illustrates the dynamics in charge in which peace education exists as a controversial issue that is discouraging for teachers to integrate into their curricula and teaching. This is in line with other studies that emphasize that peace education implies criticism of the present social, cultural, religious, and political norms that result in inequalities in the society (Harris & Morrison, 2003; Westheimer, 2007).

In Turkey, teacher education programs most frequently do not include courses on multicultural education, environmental education, and global education (Gurdogan-Bayir & Bozkurt, 2018, Erbas, 2019) that prepare future teachers to effectively integrate peace education into their teaching practice (Christopher & Taylor, 2011; Cook, 2014). Factors such as the lack of educated faculty members to teach these courses as well as limited financial resources are among possible reasons for this (Akar, 2010; Çelik & Gür, 2014; Çetinsaya, 2014; Gök, 2016; Kurt & Gümüş, 2014; Simsek, 2007). As a result, teachers in Turkey most frequently are inadequately prepared in order to integrate peace education into their curriculum and practice.

The challenges peace educators are likely to face in their practices of integrating peace education into their curricula are well-reported in the literature (e.g., Gursel-Bilgin, 2016,

2017, 2020b, 2021; Gursel-Bilgin & Flinders, 2020; 2021; Darder, 2012; Harris & Morrison, 2003; Navarro-Castro & Nario-Galace, 2008; Noddings, 2012; Zamir, 2009; Zartman, 2007). For example, Zartman (2007) identifies the elusive nature of the definitions of peace, insufficient pedagogical methods, controversial class materials and topics, and lack of comprehensive evaluation of programs focused on the peace education practices and their outcomes. Closely linked with these challenges are pedagogical obstacles for peace education practitioners: emotional and cognitive mistrust towards peace education, expressions of stereotypes often promoted by media, the politicization of peace education often leading to propaganda, and the existence of culture of war interwoven into social norms and values and reflected in school culture and curricula (Zamir, 2009).

Wellbeing of Teachers

A growing body of literature emphasizes the significance of teacher wellbeing in educating future generations effectively (Acton & Glasgow, 2015; Hwang et al., 2017; Vesely et al., 2014). This emphasis has only become stronger with the circumstances resulting from the Covid-19 pandemic (Dabrowski, 2021; Gadermann et al., 2021). Reviewing the literature, the wellbeing of educators from the perspective of burnout, occupational stress (Vesely et al., 2014), anxiety and depression (Hwang et al., 2017) are also emerging as significant. Defining wellbeing may be crucial in the context of this study as there are various understandings and explanations of wellbeing in the literature (Acton & Glasgow, 2015; La Placa et al., 2013).

In their book Rath & Harter (2010) conducted a comprehensive study with Gallup, an American analytics and advisory company known for its public opinion polls conducted worldwide, and collected participants' data in more than 150 countries. As a result of their study, they revealed five universal, interconnected elements and defined wellbeing as the interaction of these five elements:

1. Career wellbeing is about how you occupy your time or simply liking what you do every day.
2. Social wellbeing is about having strong relationships and love in your life.
3. Financial wellbeing is about effectively managing your economic life
4. Physical wellbeing is about having good health and enough energy to get things done on a daily basis
5. Community wellbeing is about the sense of engagement you have with the area where you live

They found out that only 7% are successful in all five elements and 66% of people are doing well in at least one of these areas. When we are talking about wellbeing and factors that may affect someone's health or happiness, we should look at that person holistically and consider both external conditions, such as income, satisfaction at work and social networks and internal conditions, such as optimism, resilience and self-esteem (Rath & Harter, 2010; Şinik, 2018). To strengthen our wellbeing, we should strengthen all of these five elements and to be able to do that one should take care and balance their mind, body and spirit so that they feel capable, resilient and in harmony with those around them (Rath & Harter, 2010; Şinik, 2018). An alternative medicine advocate Dr. Chopra (1991) mentioned five items as a holistic health indicator. The first indicator of overall health is to have an energetic and healthy body; the second is to have a calm, clear and cheerful mind; the third is a heart full of love and kindness; and the fourth indicator is an awareness of one's existence and purpose in life. His life-long research and related literature (Chopra & Tanzi, 2018) found stress as one of the biggest factors affecting the overall health. Other factors enhancing and strengthening our wellbeing are having enough sleep, clean eating, and having a healthy digestive system. Various methods integrate wellbeing approaches in terms of stress management and

to create a balance between mental, spiritual and physical health. The ones that are commonly used with teachers are emotional intelligence (EI), mindfulness-based practices, contemplative pedagogy, and positive education. Before briefly discussing these methods, in this particular study wellbeing of teachers refers to teachers' awareness of their personal and professional purpose and goals, ability to work harmoniously with themselves and with others, and having sense of personal and professional fulfilment, satisfaction, and happiness (Soini et al., 2010) within their contextual factors.

Methods that are Commonly Used with Teachers to Enhance their Wellbeing

1. Emotional intelligence (EI): Development of emotional intelligence as a competence facilitates the identification and regulations of emotions that increase stress (Austin et al., 2005; Hansen et al., 2007; Vesely et al., 2014). Research has shown that emotional competence enhances the management of occupational stress and contributes to teacher efficiency in the workplace. Hansen et al. (2007) conducted a study on EI that is used to regulate emotions and enhance stress management. They designed a stress management program that was administered for pre-service teachers for over a five-week period. They found that EI can be used to regulate emotions, enhance stress management, also amplify teacher wellbeing and classroom performance. In 2014, Vesely et al. did a similar study with pre-service teachers; their findings are in line with Hansen et al. (2007). At the end of their 5-week EI training program Vesely, et al. (2014) observed that the teachers' stress and anxiety levels are decreased and their capacity to cope with occupational stress are increased.
2. Mindful based practices: Kabat-Zinn (2011) defined mindfulness as paying attention and being in a present moment in a non-judgmental stage. He developed the Mindfulness-Based Stress Reduction (MBSR) program that includes methods such as mindful eating, walking, exercising, meditation and silence retreat and found that the program successfully reduces the stress of people with chronic health problems (Kabat-Zinn, 2011). Hwang et al. (2017) conducted a systematic review that was done on implementation of mindfulness-based practices for in-service teachers. They found that mindfulness-based practices adopted from Kabat Zinn reported improvements in teachers' psychological and behavioral health, an increase in commitment to their profession, and positive effects on reducing teachers' stress and burn-out.
3. Contemplative pedagogy: Contemplative teaching includes methods such as guided meditation, keeping journals, practicing silence, music, art, poetry, dialogue, and questions to "quiet and shift the habitual chatter of the mind to cultivate a capacity for deepened awareness, concentration, and insight" (Chick, 2010, p. 2). According to Bush (2006) contemplative pedagogy is becoming a scholarly field; however, its roots go back to 1997 where Williams James addressed it as "the power of mindful learning" (p.3).
4. Positive education: Seligman et al. (2009) defined positive education as "education for both traditional skills and for happiness" (Seligman et al. 2009, p. 293). They conduct their study in Australia to define positive education as new prosperity for both wealth and well-being. They tested two different programs for schools, the Penn Resiliency Program (PRP) and the Strath Haven Positive Psychology Curriculum. They found that both of these programs "produce positive and reliable improvements in students' well-being" (Seligman et al. 2009, p. 303).

Although these four, emotional intelligence, mindfulness-based practices, contemplative pedagogy and positive education are taken as different methods, they all

"involve teaching methods designed to cultivate deepened awareness, concentration, and insight" (Chick, 2010, p. 1) about one-self to enhance personal and professional wellbeing.

Chick (2010) emphasized the importance of meditation and how it can be used to increase creativity in education. In the guide to be able to act on situations adequately, she recommends educators to "engage in regular meditation practice" (Chick 2010, p. 4). To increase participating teachers' wellbeing, the University of Virginia created a program called Cultivating Awareness and Resilience in Education (CARE). Their goal was to increase the wellbeing of participants by "providing them with specific skills and practices to better cope with classroom demands" (Breen, 2016, p. 1). They found out that educators that use methods and strategies regularly to reduce their stress "increase their abilities to cope with the demands of the career and are positioned to do a better job educating students" (pg.2). Shapiro et al.'s (2008) empirical study emphasized that meditation can be used as an effective tool to support students' mental health under stress. Following what they have highlighted in their study, it can be said that meditation may be used to well-prepare educators for the social and emotional demands of the classroom and build "stress resilience" (p.3) of educators (Shapiro et al., 2008). Similarly, Turkey's researchers at a mid-size public university observed that student and instructor motivation levels drastically decreased (Cihan-Aydoğdu & Tok, 2021). The co-author of this article and her colleague designed a workshop for 8 weeks for undergraduate students to explore the influence of contemplative pedagogy and positive education on students' wellbeing. The workshop aimed to raise students' awareness of wellbeing and introduce them with practice to reduce stress levels and increase motivation for learning. In conjunction with meditation, breathing and qigong exercises, issues such as healthy eating habits, sleeping patterns and aromatherapy were discussed together by inviting experts from the fields. The small-scale case study findings supported that a practice of these methods increases students' motivation and decreases their stress levels within the framework of the relevant literature (Cihan-Aydoğdu & Bengü, 2021).

Discussion

Teaching has been ranked as one of the most stressful jobs (Johnson et al. 2005). Given the challenging nature and context of teaching due to organizational, social and economic factors, one does not need to be an expert to see how challenging and stressful teachers' personal and professional life could be (Kokkinos 2007; Spilt, 2011). In peace education classrooms, these challenges only increase compared to other classes as it was discussed above.

To nourish and protect themselves and their learners, peace education practitioners need to be equipped with special techniques and practices. We believe that wellbeing approaches that are discussed in this study provide support for peace teachers in coping with the stressful environments they are in. This section discusses how wellbeing approaches can benefit teachers' personal and professional environments under two different subtitles.

The Individual Benefits of Practicing Wellbeing for Peace Educators

Teachers are more open to novelties when they are in a positive state (Fredrickson, 2012). In the case of peace educators, establishing and maintaining a positive state can be even more challenging as discussed in the related section above. In fact, peace educators, most frequently, if not always, find themselves swimming against the current due to the social, cultural, economic, religious, and political challenges they face while planning and teaching classes integrating various aspects of peace education (Darder, 2012; Gursel-Bilgin, 2016, 2017, 2020b, 2021; Gursel-Bilgin & Flinders, 2020; 2021; Harris & Morrison, 2003; Navarro-Castro & Nario-Galace, 2008; Noddings, 2012; Zamir, 2009; Zartman, 2007). Given that peace starts from within and peaceful teachers will be more successful peace

practitioners, caring for the wellbeing of peace educators is particularly vital. Considering that teachers are the most important factor in determining the success of any curriculum and program, the wellbeing of peace educators must be supported through related courses that can be integrated in teacher education programs as well as in-service training programs.

Teachers' wellbeing has a profound influence on learner wellbeing. Due to this direct influence, learner wellbeing and teacher wellbeing are considered the two sides of a coin (Roffrey, 2012). Teachers' satisfaction with their life and work is reflected in their interaction with others (Mifsud, 2011). In other words, teachers' wellbeing is highly contagious (Becker, 2014) due to its direct link to both academic and personal achievements and lives of learners (Briner & Dewberry, 2007). Their students tend to decode the verbal and nonverbal signs in their communication and catch their teachers' moods, and eventually copy those in their own lives consciously or unconsciously (Mercer & Gregersen, 2020). What is more interesting is the mutual nature of this influence. Positive rapport between learners and teachers directly influences teachers because research suggests that happy and motivated students increase teachers job satisfaction (Mercer & Gregersen, 2020).

Research on teacher wellbeing is vital especially to better understand their concerns and challenges, and so prevent teacher burnout; to help teachers develop and/or increase positive attitudes towards school reforms and contribute to social transformation; improve learners' socioemotional and academic lives (Lochman 2003; Moolenaar 2010; Spilt et al., 2011; van Veen et al. 2005). Most empirical research has focused on social and organizational factors that influence teacher wellbeing (Spilt, 2011). The factors studied broadly include lack of supportive community and supervision, administrational and instructional workload, and issues related to classroom management (Kokkinos 2007). Although the teacher-student rapport and its effects on the lives of learners have been extensively studied (Frisby et al., 2017; Frisby et al., 2020; Frisby & Martin, 2010; Sidelinger et al., 2016) the influence of learners on teacher wellbeing is understudied in the related literature (Friedman, 2000; Spilt, 2011). Considering the interpersonal nature of the interaction between teachers and learners, the complexities and challenges teachers experience as a result of this interaction and relationship with learners are yet to be explored (Spilt, 2011). Therefore, future research would do well to explore the reflections of these factors on the personal wellbeing of teachers, and ways to improve teachers' positive state effectively.

The Professional Benefits of Practicing Wellbeing for Peace Educators

The limits of teachers' influence on learners are non-measurable. However, it is important to underline the multidimensionality of their influence. Although wellbeing practices are not widespread worldwide yet and there are few studies exploring their effects on learners (Soutter et al., 2012). The limited empirical findings underline the various benefits on the lives of the learners. Curriculum and instruction integrating wellbeing practices and approaches have been found to be beneficial for both learners and teachers. For example, Schwind et al. (2017) offered (five-minute) instructor-guided mindfulness practices over eight weeks at the beginning and end of classes to graduate and undergraduate students from various disciplines in an urban university. The participants also practiced mindful breathing techniques for five to fifteen minutes individually at home. The results emphasized increased learner and teacher wellbeing with decreased anxiety and stress, and more respectful and peaceful class environment (Schwind et al., 2017). These findings are in line with others emphasizing beneficial effects of mindful practices in terms of increased wellbeing (Hassed & Chambers, 2014; Smalley & Winston, 2010;).

Wellbeing practices when integrated into school curricula and instruction result in several benefits for learners. For example, mindfulness practices integrated in undergraduate

and graduate programs of higher education have been found to help learners effectively cope with anxiety and stress and increased personal wellbeing and academic achievement (Hassed and Chambers, 2014; Miller, 2012). The CARE program (Breen, 2016) discussed above is another example of the effectiveness of the way we teach. In the program, the teachers receiving the wellness training also positively influenced the qualities of their classes. They were able to demonstrate greater sensitivity towards the needs of their students and better support their students emotionally than those teachers who did not receive the training.

Considering the social, organizational, cultural, religious, and political pressures peace educators and learners experience while studying peace education, various forms of wellbeing practices might do wonders in helping them cope with those challenges. Besides using wellbeing as part of formal instruction of schooling experiences, they can also integrate wellbeing practices in the hidden or indirect curriculum. This can be achieved, for example, through the attitudes and behaviors of the teachers when they engage in interaction with others. The interactions of teachers with a positive state and high motivation will (in)directly influence the wellbeing of learners. Moreover, learners will obtain a chance to learn the related approaches and practices by observing their teachers. In peace education, the medium is at least as important as the message. The way we teach must be consistent with the content being taught, or in other words, "the medium must match the message (Navarro-Castro, 2010, p. 16). Wellbeing approaches and practices can help peace educators enrich their instructional materials and techniques to better fulfill what they stand for.

Conclusion and Implications

In this review study, we sought to understand how wellbeing approaches and practices such as emotional intelligence (EI), mindful based practices, contemplative pedagogy, and positive education contribute to peace education. According to research in the field, methods that are commonly used with teachers to enhance their wellbeing can be an antidote for their stress, may increase their life and work satisfaction, and can be used as an aid for positive engagement with themselves, their peers, students and environment. Although teaching is found to be a demanding and stressful profession in general, peace educators are specifically portrayed as swimming against the current due to the structural, cultural, social, and political challenges that exist within the school and higher education systems. These challenges make peace educators' job exceptionally tough. Therefore, focusing particularly on the needs of peace educators, we drew from higher education, peace education, and educational leadership and policy studies to examine the offerings of wellbeing practices towards supporting peace educators in their controversial and challenging practices. Although our primary focus in this study is peace education, we strongly believe that the implications expand to all subjects in schooling and school culture.

In this context this article may be considered a first in Turkey. There is value in increasing awareness regarding the critical conditions in which these teachers have to swim against the current and provide various methods to reduce emotional exhaustion and stress that they may experience at their workplace. In light of the discussion in the article, we can suggest that wellbeing interventions should be included in teacher training programs at higher education institutions and in-service programs. Embedding these practices into the whole curriculum may be seen risky at first. We suggest institutions, researchers and practitioners to pilot wellbeing approaches and practices with a small group of attendees and improving the process according to the outcomes. This may require creating funds for skilled trainers as wellbeing interventions should be implemented in a structured way. After gaining contextualized experience and insights, the existing curricula at both K-12 and higher

education institutions can be reconsidered in order to integrate wellbeing practices across K-12 and higher education programs.

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Contextual Analysis of Proofs Without Words Skills of Pre-service Secondary Mathematics Teachers: Sum of Integers from 1 to n Case

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Contextual Analysis of Proofs Without Words Skills of Pre-service Secondary Mathematics Teachers: Sum of Integers from 1 to n Case

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Abstract

Recently, studies have been carried out on alternative proof methods due to the change in the perspective of teaching proof and the difficulties of learners in proof. In this context, proof without words, which are presented as an alternative to proof teaching, defined by diagrams or visual representations and require the student to explain how proof is, are discussed in this study. The aim of this study is to examine pre-service mathematics teachers' explanations of proof without words about the sum of consecutive numbers from 1 to n. The data were collected by the proof of the sum of consecutive integers. 27 pre-service teachers from a university in the Middle Anatolia region participated in this study, which was conducted using a basic qualitative research design. At the end of the study, it was seen that most of the preservice teachers were unable to explain the proof without words of the sum of integers from 1 to n. One of the reason for this may be related to the spatial thinking skills of pre-service teachers. However, there are pre-service teachers who can interpret the visual given in the proof correctly, use the necessary mathematical knowledge, but cannot generalize using the given visual. The reasons why the pre-service teachers could not express the general situation are considered as the lack of algebraic thinking.

Key words: Proof, Proof teaching, Proofs without words, Visual proofs

Introduction

Proof plays an important role in the development of mathematical thinking skills. For this reason, it has been an important part of mathematics education at all grade levels. Finding a new proof is not possible at all levels. Heinze and Reiss (2004) state that formal proof can be done by experts, and this will not happen in school mathematics. On the other hand, according to Ugurel, Morali, Karahan and Boz (2016), everyone has the capacity to understand the proofs of theorems. For many students, however, the proof is a ritual without understanding (Ball, Hoyles, Jahnke, & Movshovitz-Hadar, 2002). In this context, the perception towards proof has begun to change especially in recent years. This changing perception requires that proof convince the student and be practical (Almeida, 1996). In particular, new and alternative ways of learning and teaching for proof are investigated (Hanna, 2000; Polat, 2018). However, how students' deeper understanding of mathematical proof is seen as a difficult research area (Marrades & Gutierrez, 2000).

Students who write in their notebooks without understanding the proofs made in mathematics lessons can gain the ability to follow the process instead of understanding. Producing arguments about proof provides understanding (Altun, 2014). Proof, which is seen as one of the basic elements of mathematics, is not only a goal of learning mathematics but also a tool that helps students to understand mathematical concepts (Kristiyajati & Wiyaja, 2018). In this context, proofs without words (PWW) are presented as an alternative way to proof teaching because they are diagrams or pictures that help us to see why a mathematical expression is correct (Gierdien, 2007; Alsina & Nelsen, 2010).

When the purpose of the proof is to clarify the mathematical expressions and to convince the student of the correctness of the mathematical expression, pictures and diagrams offer mathematical expressions from a different perspective (Thornton, 2001). Using the objects instead of numbers and properly aligned with the resulting models, the relationship between operations and numbers can be revealed. At this point, Rinvold and Lorange (2011) argue that discussing with objects representing numbers is important for proof teaching. Because in the theorems about natural numbers, insight can be gained when numbers are used as objects (Alsina

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& Nelsen, 2010). Additionally, using numbers as objects is the essence of algebraic thinking. Showing numerical relationships using geometric representations leads to a relational approach rather than a numerical one. This is a way to improve algebraic thinking (Flores, 2000; Thornton, 2001). On the other hand, teachers who privilege only algebraic representations prevent their students from establishing relationships in the process of proving (Duval, 1999). As a matter of fact, Dogan (2019) revealed that although teachers believe that symbolic representations are abstract, they believe that proofs should always include symbolic representations.

Theoretical Framework

Proofs show that the information given in the theorem is consistent with the axioms and mathematical results. Therefore, while there is sentence reasoning in classical proofs, there are "visual information", "visual argument" and "visual reasoning" in proofs without words using visuals. When Proofs without words are well organized, they are easily represented by points or concrete objects, and the resulting patterns can be easily seen (Miller, 2012). Cain (2019) has handled proof without words as proofs using spatial thinking. For this reason, he called proofs without word as spatial proofs. According to him spatial proofs are simpler than the inductive proofs. In many sources, proofs without words about integer sums are included (Cain, 2019; Nelsen, 1993; 2000; Lam, 2007; Larson, 1985; Giaquinto, 2007). As a matter of fact, there are many different ways of proving the formula of the sum of consecutive integers from 1 to n, or showing the accuracy of the formula. Indeed, Lam (2007) uses spatial visualization, Gauss method, pairing of terms, statistical approach, using counting arguments, using binomial coefficients, using relations involving binomial expansions, using the coefficients of binomial expansions, method of difference, mathematical induction, and many other methods to show the way to prove the formula of the sum of integers. In Lam's study, Lam (2007) referred to books written by Nelsen (1993; 2000) without mentioning proofs without words under the title of "spatial visualization". Larson (1985) showed different proofs under the headings of draw a figure, finite differences, mathematical induction, search for a pattern, counting argument, one-to-one correspondence, recurrence relations, generating function, Calculus, constructive combinations. Under the heading "Draw a figure" he has included many different examples of proofs without words. In Lam's (2007) and Larson's (1985) studies, only the sum of consecutive numbers from 1 to n is taken as a basis. On the other hand, Giaquinto (2007) stated that there are four ways to show the accuracy of the sum of the numbers from 1 to n. These are inductive, Gaussian, pebble or dot, square arguments. The proofs defined as pebble (dots) and square arguments are given under the name of visual proof. Also, Nelsen (1993; 2000) has included many different visual proofs in his books regarding the sum of the numbers from 1 to n.

Proofs without words are used in many proofs such as geometric theorems, number theory, trigonometry, general mathematical inequalities (Alsina & Nelsen, 2010; Bell, 2011). Nelsen (1993; 2000) categorized in his book as geometry and algebra; trigonometry, calculus and analytic geometry; inequalities; integer sums, sets-series and mixed proofs without words. Davis (1993) states that proofs without words can be used to show all results of plane and solid geometry, high mathematics theorems with visual basis and graphical representations of applied mathematical results. Hanna (1990) used the concepts of "explanatory proof" and "a proof that proves". In the case of the sum of the first n numbers, Hanna stated that the "a proof that proves" is a mathematical induction, while she expressed the "Gaussian rule" and the visual consisting of the points in the right isosceles triangle in Figure 2b as "the explanatory proof". According to this visual, the dots form isosceles right triangles containing $S(n) = 1 + 2 + 3 + \ldots + n$ dots. Jamnik, Bundy and Green (1997) presented a taxonomy, including "non-schematic proofs", "schematic proofs" and "inductive proofs" for proofs without words.

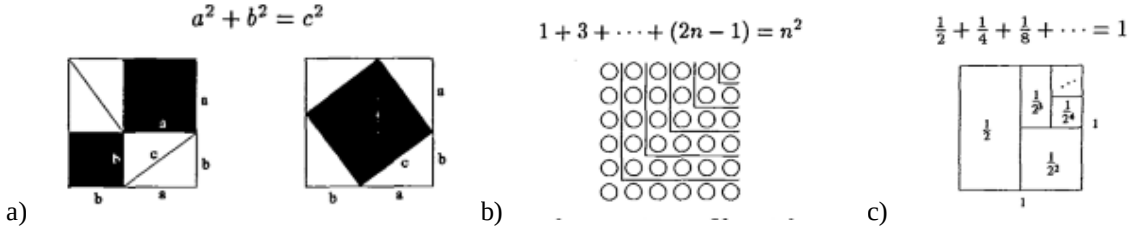


Figure 1. Schematic-non-schematic-inductive proof

According to this taxonomy, *non-schematic proofs* are evidence that show the accuracy of the situation with simple geometric manipulations on the diagram without induction as shown in Figure 1a. So, we can say non-schematic proofs prove the general situation. *Schematic proofs* are evidence that require induction for the state

of the n. dimension, which does not require inductive steps to prove the theorem in each of the special cases, as shown in Figure 1b. As shown in Figure 1c, *inductive proofs* are evidence that require the inductive step to prove each concrete situation of the diagram. The example given in Figure 1b is similar to the generic examples from Balacheff's (1988) proof schemes (Figure 2). General examples show a certain number and form the basis for a more general argument and are in an important position in terms of providing explanation and opinion (Dogan, 2020).

Balacheff (1988) stated that direct demonstration is the most basic form of proof and that it constitutes a transition stage from pragmatic proofs to conceptual proofs. As a matter of fact, as can be seen in Balacheff's example, it visualizes the $1 + 3 + 5 + 7$ process. Based on this example, it is expected that the general form of the formula $1 + 3 + \cdots + (2n - 1) = n^2$ will be reached. But for Giaquinto visual methods cannot model infinite processes adequately (Dove, 2002). For this reason, according to some, diagrams are elements that can be used as an explanation of proof rather than proof (Doyle *et.al.*, 2014; Rodd, 2000). Bardelle (2010) stated that visual arguments are far from being accepted as legitimate arguments for rigorous proofs, probably because they can easily misinterpret and therefore lead to false inferences. On the other hand, for some researchers, diagrams can be a proof like formal proofs. (Alsina & Nelsen, 2010; Brown, 1997; Hanna, 1990).

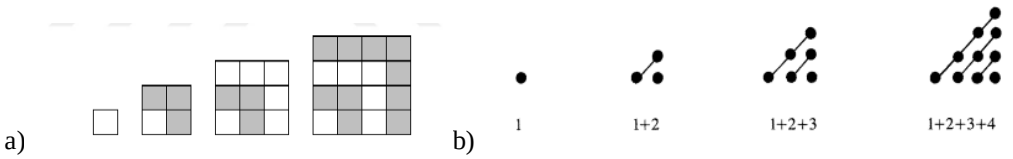


Figure 2. Sum of integers (Balacheff, 1988; p. 216)

According to some researchers since diagrams are individual examples of mathematical concepts students could not draw general conclusions from reasoning based on these (Dove, 2002; Kulpa, 2009). Despite the generalization problem, proofs without words are important tools in terms of being explanatory. These proofs have a powerful potential to serve as a bridge between empirical proofs and deductive proofs (Dogan & William-Pierce, 2021). In the study of Dogan and William-Pierce (2021) they stated that teachers struggle to distinguish generic examples from visual representations and think visual representations and generic examples to be the same. So, they said that teachers have important misconceptions about generic examples type proofs. Kulpa (2009) proposes a hybrid model to avoid this generalization problem. In this model there are textual labels associated with diagram. According to Kulpa (2009) by adding an explanation or representation about which number the dots represent, it is clarified the reasoning even further and provide the correspondence between the diagrammatic proof and formulation of the theorem. For example in Figure 3a it is a diagram for $S(5) = 1 + 2 + 3 + 4 + 5$. But in Figure 3b it is a diagram for $S(n)$.

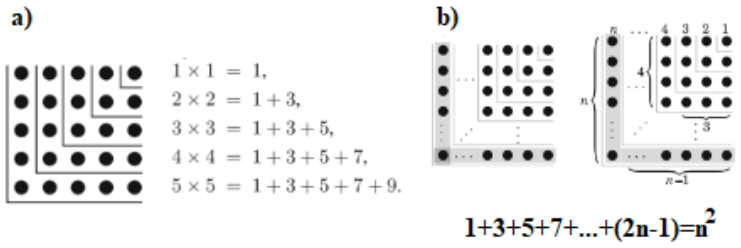


Figure 3. Hybrid representation (Kulpa, 2009; p. 90)

PWW have a powerful potential to bridge between empirical proofs and complete deductive proofs, so context of these proofs is an important research area (Dogan & William-Pierce, 2021). The proof without words, which is related to the sum of consecutive integers, especially based on many studies, has been used in this study. The purpose of this study is to examine the explanation of pre-service secondary mathematics teachers the proof without words which is related to the sum of consecutive numbers from 1 to n. In this context, the research questions of this study are:

1. Can do the preservice secondary mathematics teachers explain the proof without words of sum of 1 to n?

2. How do the preservice secondary mathematics teachers explain the proof without words of sum of 1 to n?

Method

Basic qualitative research is the most common form of qualitative research that can be seen in all discipline and practice areas. In these studies, which questions are asked, what is observed, which documents are considered relevant depend on the theoretical framework of the study. (Merriam, 2013, p.22). In basic qualitative research classified by Merriam (2013), data can be collected by observation, interview and document analysis, as in another qualitative research. In the data analysis of this research type, the repetitive patterns that characterize the data are tried to be determined. Findings are themes supported by these recurring patterns. The whole interpretation is that the researcher understands the phenomenon he is interested in. In this study, pre-service teachers were asked to explain the PWW, and these explanations were analyzed. Written explanations and drawings they made regarding the PWW given to the pre-service teachers were accepted as documents. The main purpose of this study is to reveal and interpret how pre-service mathematics teachers explain the PWW. For this reason, this study, which aims to understand and interpret the explanations of pre-service mathematics teachers about the PWW of the sum of the consecutive numbers, is considered as a basic qualitative research. Researchers of this study, in their previous studies, obtained results about the difficulty in proof without words at all levels. They observed that students cannot generalize from a single example situation given in the visual (Demircioglu and Polat, 2015; Demircioglu and Polat, 2016; Polat and Akgün, 2020). In order to examine this problem, the data collection tool selected, and the explanations of the preservice mathematics teachers about the proof without words analyzed. 27 preservice mathematics teachers in the senior class of mathematics education department from a university in the Middle Anatolia region attended the study. Data were collected in the spring semester of 2017-2018. Considering that the preservice mathematics teachers are in the final year, they are considered to have sufficient conceptual and operational knowledge levels in mathematics, and they are also successful in taking the mathematics education courses in the program.

Data Collection and Analysis

A few steps were followed while choosing the proof without words to be included in the data collection tool. Firstly, we saw that in many studies (Lam, 2007; Larson, 1985; Giaquinto, 2007) the sum of the consecutive numbers was chosen as the context and different proof methods were studied with the sum of the consecutive numbers. Although there are many different proofs, prototype images are used. Therefore, in this study, the sum of consecutive numbers is taken as a basis. After this, we examined the proofs without words related with the sum of the consecutive numbers. We saw that there are many visuals with similar thinking processes but with some differences. After the examinations, the visuals were grouped under two groups.

In the first group of proofs without words about the sum of consecutive numbers are shown in Figure 2a and Figure 2b by Nelsen (1993) and in Figure 2c by Britz, Mammoliti and Sørensen (2014).

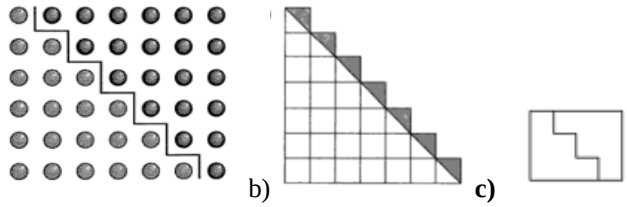
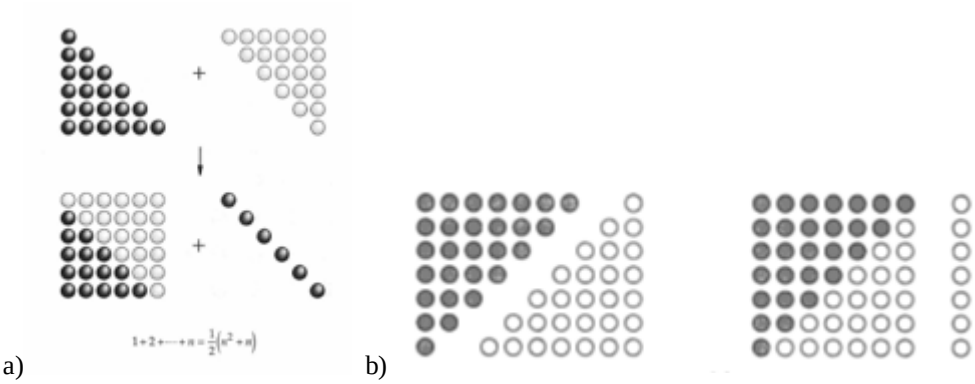


Figure 4. Single case visuals related to the sum of consecutive numbers

When the visuals given in Figure 4 are examined, it is seen that in Figure 4a the dots are used, in Figure 4b squares are used and in Figure 4c neither the dots nor the squares are used. Furthermore, in the second group of PWW given by Nelsen (2000) regarding the sum of the numbers 1 to n is as in Figure 5a. In Figure 5b, Alsina and Nelsen (2010) gave a similar visual to this PWW.



a) b)

Figure 5. Visuals with two cases related to the sum of consecutive numbers

As seen from the Figure 4 and Figure 5, in the first group there is no visualization of the process of the dots or the squares arranging; but in the second group there is visualization of the process of arranging dots. When the visual in Figure 5a is examined, there is an emphasis on combining the figures with "+", but there is no emphasis in Figure 5b. Therefore, the visual shown in Figure 5a is thought to be more directional than the image in Figure 5b. On the other hand, while the visuals given in Figure 4 are given in one case, the visuals given in Figure 5 emphasize that the process displacement of the dots and a new form of reasoning should be judged in this way. In view of this situation, the visuals given in Figure 5 are taken as a basis. As a result, since it emphasizes both the situation and the combination, in this study the visual in Figure 5a for the sum of integers from 1 to n by S. J. Farlow in the book "Proof Without Words II" by Nelsen (2000, p. 83) was selected as a data collection tool. The proof without words of the sum of consecutive numbers was given to preservice mathematics teachers and they were asked to explain the proof without words. Preservice mathematics teachers were given sufficient time to explain the proof without words. Then their written explanations were collected.

Firstly, the data collected in writing was transferred to the computer environment. The answers of the preservice mathematics teachers were examined by two experts and important expressions were defined and the main themes were determined with content analysis. No answer, unaccepted and accepted categories are created. There are sub-categories under "No answer" category, "blank, writing number of dots and expressing the number of dots with n"; under "Unaccepted" category "over generalization, those who did not use the second case for explaining the visual for n, showing the accuracy for $n = 6$ and Gauss method"; and under the "Accepted" category "accurate generalization, accurate generalization (emphasis on diagonal), explaining visual for n". After the main themes were determined, the findings were revealed by examining the relationship between each case and other situation.

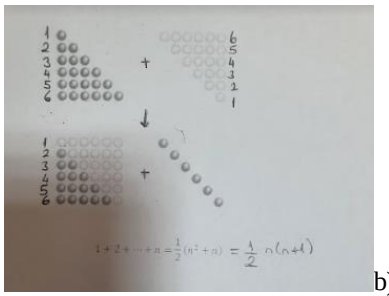
Results

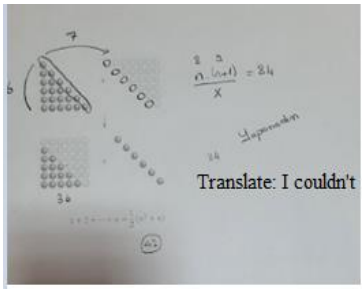
The explanations of the preservice teachers about the proof without words of the sum of consecutive numbers were analyzed. The explanations obtained from the question in the data collection tool are summarized in Table 1.

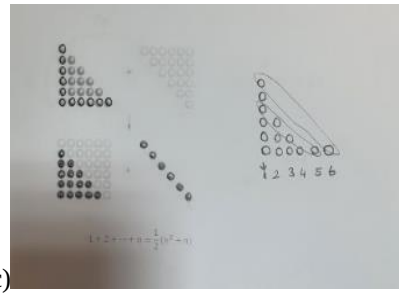
Table 1. Answers to the solution of proof without words regarding the sum of consecutive integers

Categories	Subcategories	f	Total	%
No answer	Blank	5		18
	Writing number of dots	4	12	14
	Expressing the number of dots with n	3		11
Unaccepted	Over generalization	1		4
	Those who did not use the second case for explaining the visual for n	2	7	7
	Showing the accuracy for n=6	1		4
	Gauss method	3		11
Accepted	Accurate generalization	2		7
	Accurate generalization (Emphasis on diagonal)	5	8	18
	Explaining visual for n	1		4

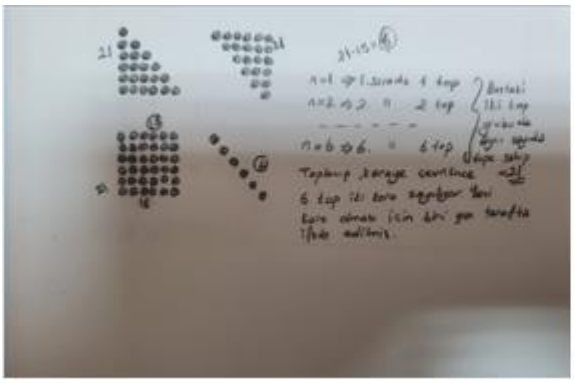
As can be seen from Table 1, the answers of 12 preservice mathematics teachers were placed under the "no answer" category. 5 preservice teachers in this category have been coded as "blank" since they did nothing. 4 preservice mathematics teachers tried to count the dots in the row in the given image (Figure 6a, Figure 6d), in the column (Figure 6b) or in the diagonal (Figure 6c). Therefore, the given answers are coded as "Writing the number of dots". However, the preservice mathematics teachers did not provide any explanation for providing relationship. For this reason, these answers are placed under the category of "no answer". The answers of the preservice mathematics teachers are given in Figure 6.

a) 

b) 

c) 

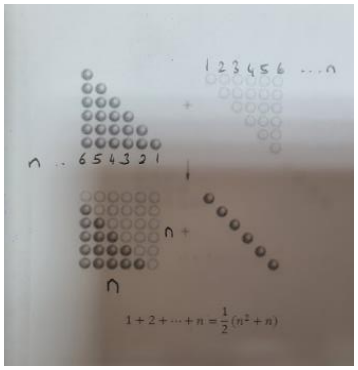
d)

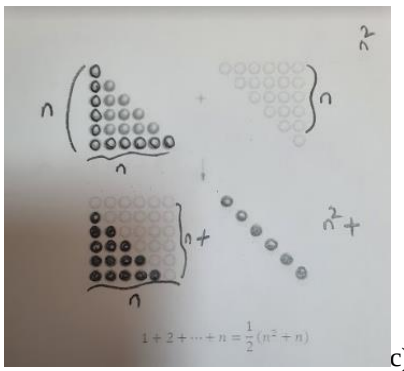


Translate:
n=1 In line 1 1 ball
n=2 In line 2 2 ball
.....
n=6 In line 6 6 ball
There are 21 balls in each of initial shapes =21
When added and turned into a square 6 balls be regarded as two squares. so to be square one of them expressed the other side.

Figure 6. Answers to the category "No answer"

The other 3 preservice mathematics teachers in this category counted the dots in the same way as the preservice mathematics teachers who tried to find the number of dots, but as a difference they tried to associate certain number of dots with n (Figure 7). Therefore, these answers are also expressed in the subcategory of "Expressing the number of dots with n". One of the preservice mathematics teachers counted the dots in the column in the first case in the visual as seen in Figure 7a, and generalized the number of dots to n. The preservice mathematics teacher, then thought that the second case was a nxn square. Unlike the previous preservice teachers (Figure 7b), the other preservice mathematics teacher generalized the number of dots without counting the number of dots. The third preservice mathematics teacher, as opposed to the previous preservice mathematics teacher, wrote the number of dots in the second case as $n^2$and n as seen in Figure 7c, and from here it was interpreted the first case as $\frac{n^2+n}{2}$.

a) 

b) 

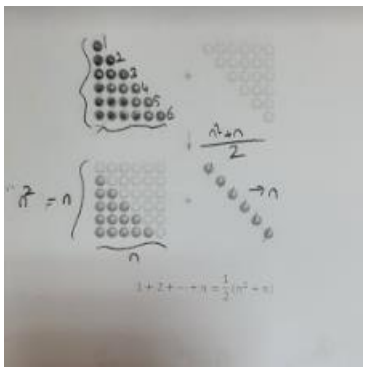
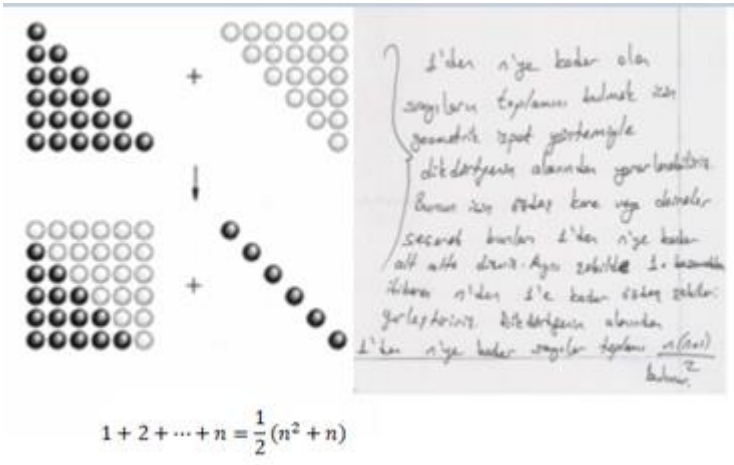
c) 

Figure 7. Answers for subcategory of "Expressing the number of dots with n"

When Table 1 is examined, it is seen that there are 7 answers in the "Unaccepted" category. These were categorized under the following sub-categories: 2 preservice mathematics teachers "those who did not use the second case for explaining the visual for n"; 3 preservice mathematics teachers "Gauss method"; 1 preservice mathematics teacher "Over generalization" and 1 preservice mathematics teacher "Showing the accuracy for $n = 6$". When the answers were examined, two preservice mathematics teachers (Figure 8a, 8b) were able to reach the formula considering the first case in the given image. Thus, for the sum of the numbers from 1 to n, they formed a rectangle with side lengths n and $(n + 1)$, by combining the two isosceles triangles. They expressed that the asked formula was half of the area of the rectangle and that is, $\frac{n.(n+1)}{2}$. This is a correct approach, but it is not an explanation of this image because it does not take into account the second case given in the visual. In Figure 8c, the preservice mathematics teacher wrote that it could be $n.n + n$ for n. case $n.n + n$ dot after drawing the $n = 1, n = 2$ and $n = 3$ cases of the given visual. Namely instead of reaching the formula using the n. case relationship, the preservice mathematics teacher tried to reach the formula by taking into consideration all the cases from 1 to n. So, although it was sufficient to write $n.n + n$, the preservice mathematics teacher wrote $(1^2 + 2^2 + \cdots + n^2) + (1 + 2 + \cdots + n)$ because he/she took into account all the cases.

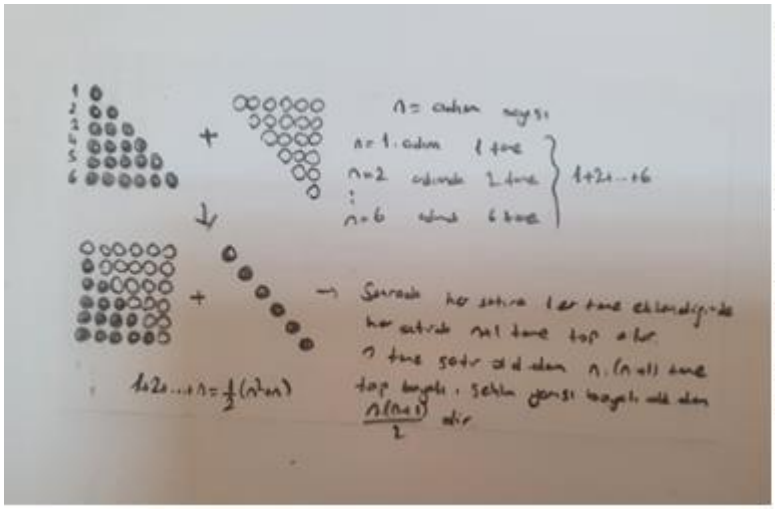
a)



$$1 + 2 + \cdots + n = \frac{1}{2}(n^2 + n)$$

Translate: We can use the area of the rectangle by the geometric proof method to find the sum of numbers 1 to n. for this we select squares or circles and arrange them 1 to n under one another. likewise, we arrange it form n to 1. then we find it from the area of rectangle.

b)



Translate:
n= number of steps
n=1. step 1
n=2. step 2
...
n=6. step 6

If we add one to each line, it becomes n+1 balls. Since there are n rows, n(n+1) balls are painted. Since half of the shape is painted, it becomes n(n+1)/2

c)

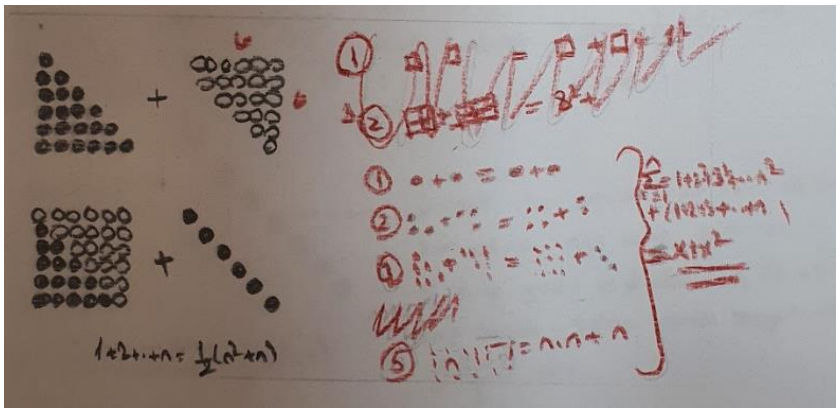


Figure 8. Answers for "Unaccepted" category

3 preservice mathematics teachers, regardless of the dots and relationships in the visual, proved the given formula by the method attributed to Gauss, whom they knew previously (Figure 9). But this is not the asked answer.

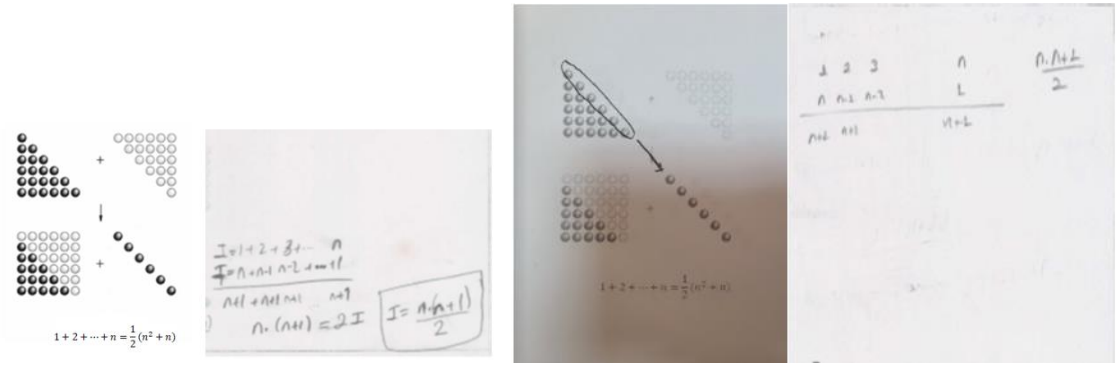


Figure 9. The answers of the subcategory of "Proof by Gauss method"

A preservice mathematics teacher showed the accuracy of the equation from the area of the triangle and square for $n = 6$ as given in Figure 10.

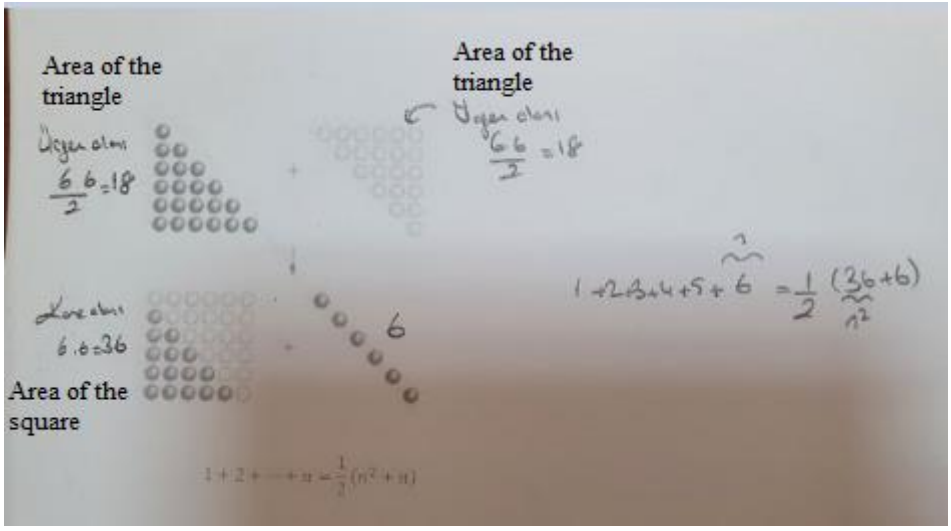
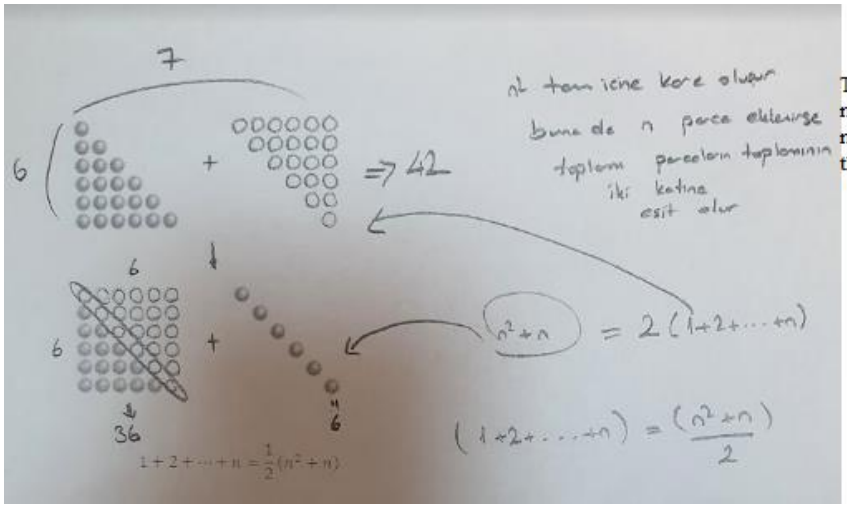


Figure 10. Answers for the sub-category of "Showing accuracy for n=6"

When Table 1 is examined, it is seen that 8 preservice mathematics teachers' answers are in the "Accepted" category. 7 of these answers are coded under the "accurate generalization" subcategory. In 5 of the answers in the "accurate generalization" subcategory, the emphasis was made on diagonal, in 2 of the answers

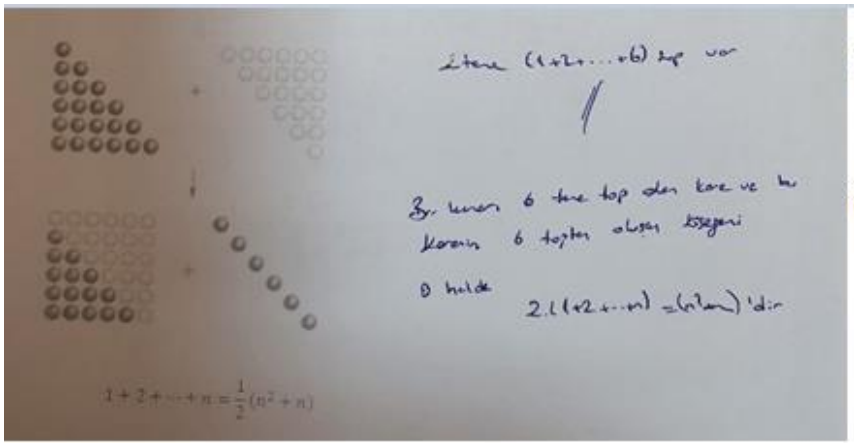
no emphasis was made on diagonal. Therefore, the answers were interpreted separately. The remaining preservice mathematics teacher was evaluated under the subcategory of "using the visual for n". As a matter of fact, a preservice mathematics teacher whose answer was given in Figure 11a, initially interpreted the visual for $n = 6$. As can be seen from Figure 11a, in the first case, considering the sum of the two isosceles triangles, $6.7 = 42$ was written and the relationship between the second and the first case was established. Then, he/she expressed this relationship as *"if n dots are added to the square, whose area is n², it is equal to twice the sum of the parts in the first case".* Then he/she wrote the equation $n^2 + n = 2(1 + 2 + \cdots + n)$and he/she showed the right side of the equation with the first case of the visual and the left side with the second case with the arrows. Similarly, another preservice mathematics teacher explained the visual for the given n=6 case as shown in Figure 11b and reached the formula for n.

a)



Translate:
n^2 exactly inside the square is formed. If n pieces are added, the sum will be twice the pieces.

b)

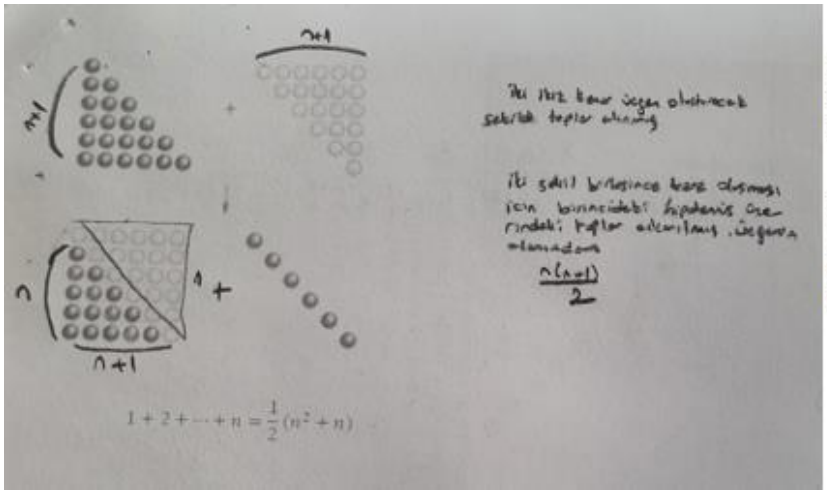


Translate:
There are two (1+2+...+6) balls

A square which the sides are 6 ball and the diagonal of the square which be formed 6 balls

Figure 11. Answers of the "Accurate generalization" subcategory

As shown in Figure 12, 5 preservice teachers explained the visual given without mentioning the special case. All 3 preservice mathematics teachers pointed out that a square and a diagonal formed when the isosceles triangles were combined and thus expressed the formula.



Translate:
The balls are taken to form two isosceles triangle

To be square the hypotenuse in the first has been separated. From area of triangle
n(n+1)/2

Figure 12. The answer to the subcategory for "Explaining visual for n"

The preservice mathematics teacher in Figure 13 interpreted the given image for n case and reached the formula and then applied the formula for $n = 6$.

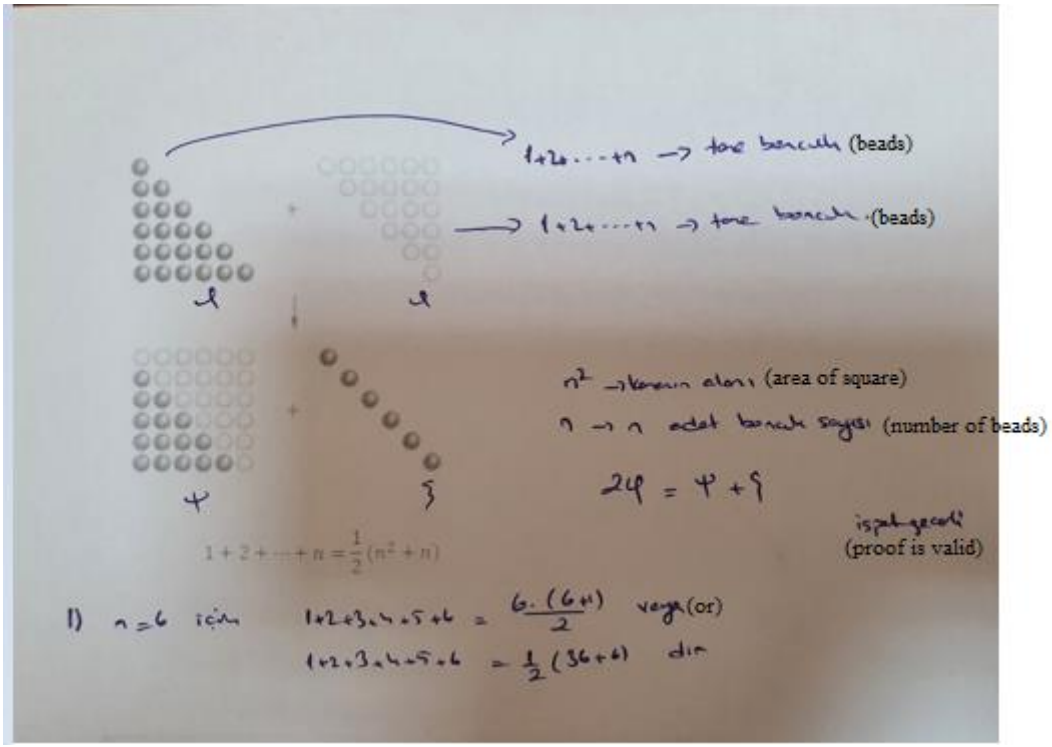


Figure 13. Answers to the subcategory for "explaining the visual for n and mentioning about the special case"

As can be seen from Figure 11 and Figure 12, preservice mathematics teachers have reached the formula by explaining the figure correctly. However, some preservice mathematics teachers explained the image given without mentioning the special case, while others interpreted the given visual for n case and applied the formula for the special case.

Discussion and Conclusion

Most of the preservice mathematics teachers were unable to explain the proof without words of the sum of integers from 1 to n. Although there are many reasons for this, perhaps the most important is spatial thinking skills of preservice mathematics teachers. Because, as the PWW in this study, spatial processes such as rotation and reflection occur during the rearrangement of points or other visuals. This view is supported by Cain (2019). According to Cain (2019), proofs without words require spatial thinking. Also, according to Presmeg (1986) a visual image includes visual and spatial information. So, we can say that spatial thinking is needed to rearrange the points to obtain a square and arrive at the formula from its field.

There are also pre-service mathematics teachers who tell the given image without any explanation. According to Gierdien (2007) definition, estimation, description, conclusion, observation, and generalization are the visualization process skills. Therefore, the fact that preservice mathematics teachers were able to explain the given visual without establishing a relationship shows that they may not have the skills of conclusion and generalizing. One of the points that draw attention here is a preservice mathematics teacher showed the accuracy of the equality from the area of triangle and the area of square for n=6. The preservice mathematics teacher was able to interpret the visual in proof without words and was able to use the necessary mathematical knowledge, but he/she was unable to generalize the given visual. Preservice mathematics teachers emphasized that the given form is an example or a special case and only exemplifies the sum of the numbers in the figure. They can explain the visual for the situation $n = 6$. In fact, what is expected from preservice mathematics teachers is that they can make generalizations. Similar results have been observed in the studies of Polat (2018), Güler and Ekmekci (2016), Birinci (2010) and Arslan (2007). It is important to emphasizing abstraction and generalization when using visual methods. Because this aspect aided students in over-coming some of the difficulties associated with the one-case concreteness of an image or diagram (Presmeg, 1986). According to Kulpa (2008), the reason for this difficulty is that finding and detecting variables in visual proof. He said that more explicitly show the variable of the problem and a way to generalize the reasoning to arbitrary n ∈ N by drawing a more elaborate diagram and using textual labels can clarify the reasoning even further and fix the correspondence between the diagrammatic proof and the formulation of the theorem. So, it can be said that explanatory texts and some visuals may be needed to generalize from the example. In the study of Dogan and William-Pierce (2021) they stated that teachers have important misconceptions about these proofs. Although we used the data collection tool which is more directional, the pre-service teachers could not generalize. They explained the special case for $n = 6$. So, we can say pre-service teachers also have important misconceptions about these proofs. According to Gierdien (2007), a single case limitation in proof without words adversely affects the visualization process; according to Demircioğlu and Polat (2016), the inability to go to generalization is due to the lack of inductive thinking in students. Mason (1996) describes the ability to see in general the essence of algebraic thinking. Therefore, it can be thought that the difficulties of pre-service teachers in deciding what to generalize are caused by their difficulties in algebraic thinking. According to Flores (2000), one way to develop students' algebraic thinking is to use the geometric representations of numerical relations. Because visual proofs guide students to understand the steps of algebraic manipulation and give concrete meaning to algebraic terms. Also, one reason of this situation that preservice teachers cannot think with intuitive version of mathematical induction. Cain (2019) expresses generalization from the sample case as an intuitive version of mathematical induction. So, we can say that preservice teachers who can think with intuitive version of mathematical induction can see n. step but others can see only for $n = 6$.

Some of the preservice mathematics teachers explained the PWW with the Gauss method. While the accuracy of the formula related to the sum of consecutive integers can be indicated by the Gauss method, it is not considered correct since this is not the desired method. Also, the answers of some preservice mathematics teachers were not accepted because they had explained the image with another proof without words. Additionally, it was seen that some preservice mathematics teachers were able to reach the formula considering the first case in the given image. Thus, for the sum of the numbers from 1 to n, they formed a rectangle with side lengths n and $(n + 1)$, by combining the two isosceles triangles. They expressed that the asked formula was half of the area of the rectangle and that is, $\frac{n.(n+1)}{2}$. This is a correct approach and is even given as an alternative proof (Nelsen, 1993; 2000; Lam, 2007; Larson, 1985; Giaquinto, 2007), but it is not an explanation of this image because they do not take into account the second case given in the visual. So, we can say that they had seen this proof without words before but they did not analyze the image correctly. Also, it can be said that preservice mathematics teachers, when they see the mathematical expression given with the proof without words, explain the proof that they are used to doing it without thinking about the visual, and thus they prove that they are focused on making proof and they are used to it. In particular, the presentation of proof by different and alternative means may indicate to students those mathematical expressions can be proved in multiple ways. This can prevent the mistake that the proofs are rigidly unchanged.

In future studies, the relationships between preservice mathematics teachers' spatial ability and proofs without words skills can be evaluated. There may be a new research problem that giving education on proof without words will influence the development of spatial ability and generalization skills. The same study can be done to determine the more comprehensive results achieved throughout Turkey. A parallel study can be done more deeply with primary and secondary mathematics teachers as well.

Limitations

The most important limitation of this study is that the data from the pre-service teachers were collected in written form. For this reason, the explanations could not be examined in detail based on the written data. The

reasons for the statements made by the pre-service teachers could not be clarified. Also, one limitation of this study was that we examined the answers of a small set of preservice teachers in a university. The pre-service teachers engage with formal proof who are introduced formally to PWWs for the first time during the course. So maybe other pre-service teachers may engage with the same PWW differently. Further research is needed to determine these differences.

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A Classroom-Based Training Program Involving Preschool Children for Developing Prerequisite Learning Skills and Social Skills: Ready to Learn

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A Classroom-Based Training Program Involving Preschool Children for Developing Prerequisite Learning Skills and Social Skills: Ready to Learn

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Abstract

Social skills training is a good way of intervention for preventing deficiencies in demonstrating social skills and emotional-behavioral problems, and academic deficiencies that may arise from these deficiencies. Different activities, methods, and strategies as well as different approaches from theory to practice can be included in intervention programs for social skills. This study is aimed to reveal a story-based social skills training program that is usable for preschool children in Turkey, by making promotion and performing the Turkish adaptation of a classroom-based social skills training program called "Ready to Learn" developed by Brigman, Lane & Lane (1994), the scientific effects of which have been proven. This program was developed for children aged four to seven to promote the prerequisite learning skills and social skills that are needed for school success. The program called "Ready to Learn" includes social cooperation activities to contain the use of "big books" that are read aloud, story-telling by teachers and children, activities of drawing, dramatic play, puppet, and song, activities on listening and attention, practices for understanding directions through story structures, as well as discussion and interaction. The program, which consists of a series of stories, includes five teacher strategies: (1) modeling-coaching-cueing, (2) student/child story-telling, (3) student/child story retelling, (4) positive peer reporting, and (5) encouragement council activities. Within the scope of the study, a social skills training program was gained to the literature for Turkish children in the preschool period by carrying out stages from the procedures for the provision of the program called "Ready to Learn" to the steps required by the adaptation processes. In this context, the study is envisaged to be a guide for social skills training applications and program development studies for preschool children and to provide an intellectual basis for the practices in daily life; meanwhile, it is also stipulated to be a remarkable resource for improving the problems and deficiencies experienced in the preschool period.

Keywords: Classroom-Based Training Program, Ready to Learn, Social Skills, Preschool Children.

Introduction

Socialization, which is a process of learning and teaching, starts from early infancy and childhood and continues until maturity. Socialization has a dynamic and unique structure as well as has a shaping effect on social skills. While social skills reveal the quality of the relationships and the direction of the emotional reactions, they are the skills required in ensuring social-emotional development and academic competence. Social skills are the learned behaviors that are based on social rules and ensure a child establishes proper communication with the other individuals in the society. Such behaviors are a part of mental health and predict the conditions such as school maturity, adaptation to school, and academic performance. In addition, they contribute to ensuring social adaptation and sustaining social interaction (Hockenberry, & Wilson, 2013; Takahashi, Okada, Hoshino, & Anme, 2015; Ziv, 2013). It was detected that children with positive social skills in the preschool period are more successful in performing certain tasks within the educational process such as listening, following the rules, and participating in activities (Ladd, Herald, & Kochel, 2006)) and exhibit better performance in situations with school (Konold, Jamison, Stanton-Chapman, & Rimm-Kaufman, 2010). While the preschool ages are a critical period for developing social skills, it is possible to observe deficiencies in the social skills of children (Kramer et. al., 2010). In the face of deficiencies in social skills, the feeling of loneliness, problem behaviors, communication problems, and school failure in the children come to the fore (Hukkelberg, Keleş, Ogden & Hammerstrøm, 2019; Powless, & Elliott, 1993; Whitted, 2011). According to Gresham (2016), deficiencies in demonstrating social skills arise fundamentally due to two reasons. The first of these is that the child does not know what the behavioral sequences he/she should exhibit are or what kind of social skills he/she should exhibit in which situations. The second is that although the child has sufficient knowledge about behavioral processes and skills, he/she has inadequacies in using them in social interactions. With the determination of social skill levels and deficiencies, taking steps to develop social skills is a representation of a solution-oriented approach. In the studies carried out at this point, a relationship was detected between social skills and variables such as social

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values, behavioral problems, social-emotional adjustment, problem-solving skills, self-regulation skills, attachment styles, learning styles, parenting styles, parent-child relationship, and the level of parent's involvement (Eğin-Işık, 2019; Hosokawa, Katsura, & Shizawa, 2015; Hosseini, Akhoundzadeh, & Hojjati, 2019; Kassim, Hutagalung, Leng, & Zakaria, 2020; Kaya & Deniz, 2019; Merrell, 1995; Montroy, Bowles, Skibbe, & Foster, 2014; Öztürk & Tortop, 2019; Samar, 2019; Tahmasebi, 2015). While these situations reveal that social skills are multidimensional skills, they also show that there is a need for a learning process that includes different types of interaction in the process of eliminating social skill deficiencies.

Various situations are emphasized within the framework of different approaches regarding how social skills are acquired. The behavioral approach explains that social skills are acquired through techniques such as role-playing, modeling, and giving feedback. In this context, while offering rewards and praise is put forward for negative behaviors, the emphasis is on using non-approving feedback such as ignoring negative behaviors. In the cognitive approach, on the other hand, while processes such as coaching, self-control techniques, and problem-solving strategies are highlighted, it is stressed out that it is necessary to be at a level of capability of understanding social skill behaviors from a cognitive perspective in social skills training. According to the social learning approach developed by Bandura, social skills are realized through observing and directly trying out the behavior of others (Cornish, & Ross, 2003; Elliott, & Busse, 1991; Newman, & Newman, 2012). While determining the needs in social skills training is considered as a priority, together with the views suggested by the educational approaches; preparation of educational programs in line with the appropriate methods, techniques, and approaches to meet the requirements is another step that should be taken at this point. In social skills training programs, methods and techniques suitable for the target group are used, and the content and system of the activities may differ depending on the method/technique used and on the scope of the approach. Children have different learning structures and various interests; thus different learning strategies, diversified activities, and different kinds of practices applications are needed in the development of social skills.

The studies conducted in social skills in Turkey include a group of studies on social skills training programs. It was determined that a minority of the studies in this scope were used together with the adaptation of training programs, which are widely used outside Turkey, to the Turkey sample, such as Incredible Years [IY; Webster-Stratton, 1990], I Can Problem Solve [ICPS; Shure, 2001] and Promoting Alternative Thinking Strategies [PATHS; Domitrovich, Cortes, & Greenberg, 2007] (Dereli, 2009; Dinçer, & Güneysu, 1997; Kaya, & Deniz, 2020; Ocak, & Arda, 2014). It was seen that some other researchers who practiced the training programs they developed based on the literature of social skills training (e.g., Durualp, & Aral, 2010; Kılıç, & Güngör-Aytar, 2017; Ömeroğlu et. al., 2015; Özbey & Köyceğiz, 2019; Uysal, & Kaya-Balkan, 2015). In studies based on social skills training on preschool children, it was revealed that social skills training is effective in the development of children's skills of understanding feelings and social problem solving, social competencies, peer relations, self-esteem, social behaviors, positive play behaviors, and motivation levels (Bilir-Seyhan, Ocak-Karabay, Arda-Tunçdemir, Greenberg & Domitrovich, 2017; Dereli, 2009; Hwa-Choi, & Md-Yunus, 2011; Kaya & Deniz, 2020; Kayılı & Arı, 2016; Larose et. al., 2020; Özbey & Köyceğiz, 2019; Özdemir-Topaloğlu, 2013; Sancak, 2019; Uysal, & Kaya-Balkan, 2015). In addition to these, in some studies, the effect of family participation in social skills training programs was evaluated, and it was revealed that family participation studies are important for making activities with their children by being informed about the processes for improving the parent-child relationship and family support towards their children (Boz, Uludağ, & Tokuç, 2018; Göktaş, & Gülay-Ogelman, 2016; Uysal, & Kaya-Balkan, 2015). The results of the studies on social skills training through social skills training programs developed by these researchers also emphasize that social skills can be improved using different interventions. In this line, it was determined that the training programs developed outside Turkey and used in Turkey constitute an alternative to the learning processes implemented in the country and contribute to different points from preschool education to program development.

There has been an increase in the studies on social skills that demonstrate the transition from theory to practice; meanwhile, studies emphasizing the effect of the training delivered through plays, cooperative learning, and family involvement on the development of social skills have become distinguished (such as Avcıoğlu, 2004; Boz, Uludağ, & Tokuç, 2018; Çetingöz, & Cantürk-Günhan, 2012; Durualp, & Aral, 2010; Göktaş, & Gülay Ogelman, 2016; Uysal, & Kaya-Balkan, 2015). In this framework, it has been observed in more recent national-level studies that the processes to develop social skills are addressed through different ways such as nature education (Çiftçi, 2019) and educational robotics program (Türe, 2019). In this context, it is remarkable that no study aimed to improve the social skills of preschool children through story-based processes has been found apart from the study by Baş (2011), which examines the effect of story-based education on responsibility and cooperation skills. Several studies were conducted in the international literature (Daemi, & Farnia, 2013; Esteban et. al., 2010; Guglielmo, & Tryon, 2001; Nicolopoulou, McDowell, & Brockmeyer, 2006) emphasize the importance of story-based social skills training on social skills. It is a functional technique in the development of social skills since stories contain written and visual stimuli, exemplify situations related to life

and interpersonal relationships based upon different characters, manage the processes based on thinking and producing, encourage multidimensional learning, and turn out to be an activity that ensures effective and pleasant learning. Since the attention span of children is shorter and they have not yet acquired the written reading skill in the preschool period, great importance is attached to picture story-books and storytelling activities. In addition to these, there are some findings that it is also important to include processes such as multimedia story reading and questioning, interactive shared story/book reading, interactive elaborative storytelling, parent-child book reading in the story-based training for the preschool period (Farrant, & Zubrick, 2012; Noble et. al., 2020; Zhou, & Yadav, 2017) and that there is a need for various strategies for the story-based training processes to be carried out to support the development of children. It is predicted that the inclusion of studies dealing with such interactive processes at the point of developing social skills, which is one of the multidimensional skills, will contribute to the elimination of a gap in the field. Considering that the birth of many techniques in this context, such as storytelling and narration, originated at the international level (e.g., Bell, 1990; Nicolopoulou, McDowell, & Brockmeyer, 2006; Paley, 1990), it is a fact that it will be possible to adopt an innovative education approach by following up the international literature. Based on these points, social skills training programs for preschool children, whose effects have been scientifically proven, are considered highly important.

The purpose and scope of the program, which is addressed with the fact that the programs developed for preschool children have a unique nature, as well as its strategies, are noteworthy. Accordingly, explaining the purpose and scope of the program discussed in the study, explaining its strategies, understanding the structure of the program are necessary to know the useful features of the program and to carry out effective implementation processes. It will be possible to fulfill the intended purpose of the current program and to make it functional utilizing mastering the elements of the training programs used within the education services in the context of target, content, learning process, and evaluation (Anderson, et. al., 2003; Calley, 2011; Özdoğru, 2018). In the study, the theoretical foundations and scope of the social skills training program called “Ready to Learn” (for children aged four to seven with normal development), which is a program with proven effect in the international literature (Brigman et. al., 1999; Brigman & Webb, 2003), are revealed based upon the view that it can serve as a source for the studies in this direction. In this line, it is expected that the processes set forth will contribute to the program developers and guide the studies on social skills training from preschool to different childhood periods by seeing different strategies that can be used at the stages of program development.

Purpose

The purpose of the study is to reveal a story-based social skills training program that is usable for preschool children in Turkey, by making promotion and performing the Turkish adaptation of a classroom-based social skills training program called “Ready to Learn” developed by Brigman, Lane & Lane (1994). In line with this purpose, the necessary stages in the adaptation studies of the training programs were followed, and the purpose and scope of the addressed social skills training program and what strategies it contained are emphasized. The information and explanations about this training program within the scope of the study are presented in the light of the relevant literature studies.

The Training Program’s Procurement, Turkish Adaptation, and Preparation Processes

The study is a descriptive study conducted in the survey model. In this direction, the main source of the study is the story-based social skills training program called “Ready to Learn” developed by Brigman, Lane, & Lane (1994). The study was conducted in seven stages. All these stages are described in detail in the following.

In the first stage, social skills training programs developed outside of Turkey for preschool children were examined. In this scope, a literature review was conducted in English and Turkish languages, using key concepts such as "social skills training", "social skills training program", "preschool education program" and "social skills training in preschool period". In this framework, the training programs among the sources that were reached in the electronic or printed environments, whose targets do not include the development of social skills in any manner and/or do not include children in the preschool age group, were excluded from the examination.

In the second stage, the foundations of social skills training programs for preschool children included in the scope of the examination and their alternative features to the programs used in our country were reviewed. It was decided to address the scope of study of the social skills training program called "Ready to Learn", which was determined to be a different social skills training program in terms of the scope, methods, and techniques used, and the strategies included in its content, compared to the social skills training programs used currently at the national level.

In the third stage, the steps were followed to procure the program, which is the focus of the study. Accordingly, the required permissions to adapt the “Ready to Learn” program into Turkish language and to

ensure its eligibility for the Turkish children were received through e-mail communication with Prof. Dr. Greg Brigman, an academic member at the Atlantic University, who is one of the writers who developed the training program. Correspondingly, the program booklet and the materials in this context were reached via postal mail, after performing the required conditions/procedures.

In the fourth stage, the booklet of the program called "Ready to Learn" consists of ten sections and five main stories *("Fuzzy and the Time of Great Change", "Fuzzy and the Secret of Flowers", "Fuzzy and the Daring Rescue", "Fuzzy and the Final Lesson" and "Fuzzy and the Great Migration")* as well as three supporting stories *("The Little Pigs", "The Giving Tree" and "Alexander and the Terrible, Horrible, No Good, Very Bad Day")* included in its contents, were translated by the researcher from English into Turkish, then translation was checked by an expert who knows both languages at a good level and accordingly, the necessary corrections were made. The Turkish versions of the five main stories and three supporting stories were reviewed together with a Turkish language education expert upon reviewing in terms of language and expression and spelling rules and accordingly, all the stories and content of the training program were finalized by making the necessary corrections. The Turkish version of the stories, which will be played from the audio recording CDs in the training program, was also sound-recorded and made available.

In the fifth stage, the character names in the stories of the training program that was regenerated in Turkish were recreated with the words suitable for the Turkish language structure and with the activities suitable for the Turkish preschool education system and culture. In this scope, the main character Fuzzy and his forest friends (Hawkeye, Bonnie, Hoot, and Skippy) in the stories were renamed. At this point, names with rhythmic features were preferred in a way to integrate with the characteristics of the characters, to make the names easier to remember, and to attract attention. According to this; the name "Puf Puf" was used for *Fuzzy*, who is first a caterpillar and then becomes a butterfly, the name "Pofuduk" was used for *Hawkeye* the hawk, the name "Tos Tos" was used for *Bonnie* the rabbit, the name "Tombul" was used for *Hoot* the owl, and the name "Tin Tin" was used for *Skippy* the tortoise. Since preschool children are not made to read and write directly from text in the Turkish education system, the researcher added the activity of creating a story from a storyboard prepared by the researcher was added instead of the activity of creating a story from letters in the program. The stories, Turkish versions of which were created, were bound on large (A3) and thick cardboard sheets and made ready for use. In this scope, the activities in the programs were taken off from the guide format and were arranged in the learning process format in the preschool education practices in our country, and the methods and strategies in the program were included in daily learning activities. A Turkish version of the training program consisting of two-hour activities and twelve sessions was created.

In the sixth stage, the Turkish version of the training program was submitted to experts for opinions; and in this scope, opinions were received from seven experts from the fields of preschool education, child development and education, and program development. The expert opinions evaluated the appropriateness of the activities for the developmental characteristics of preschool children, whether the content of the activities supports social skills, the suitability of the materials used in the activities for the age group, the understandability of the activities, the level of the activities to appeal to the interest and liking of preschool children, the level of the learning process to make the children active, the applicability of the activities in the preschool educational setting, the level of the activities to support the outputs and indicators outlined in the Preschool Education Program of Ministry of National Education [MoNE] (2013), and whether the activities have a story-telling based content. The required changes or arrangements were made in the training programs in line with the opinions of the experts. Three different field experts, one of whom was a lecturer at the department of preschool education and two of whom were lecturers at the department of child development, stated that among the supporting stories in the training program, the contents of the stories named *"The Little Pigs"*, and *"The Giving Tree"* and *"Alexander and the Terrible, Horrible, No Good, Very Bad Day"* were not appropriate (in terms of the solution strategies used and multidimensional effects on children) and different stories should be used instead of them. At this point, the consent of the program owner was received through e-mail correspondence and it was decided to use stories from two different story-books named "*I am Very Angry*" (published by Mandolin Publications and written by Aysen Oy) and "*All Toys Are Mine*" (published by Uçanbalık Publications and written by Aytül Akal), which were determined by the researcher for the improvement of social skills, instead of these stories.

Finally, *in the seventh stage*, a pilot scheme was carried out for the first three sessions for the Turkish version of the training program consisting of twelve sessions (two hours each session) on preschool children, and its applicability was tested. Parental consent forms were obtained from the families of the children receiving preschool education in the classroom where the pilot study was carried out for the permission statements for their children to be included in the educational practices, and the children's participation in the process was

carried out voluntarily. In this scope, the pilot study was carried out on children who received preschool education in a kindergarten in an official primary school in the province accessible to the researcher, in line with the random sampling selection. Within this context, it was tried to ensure the researcher review the activities and expressions in the whole program and to have a good command of the processes involved in the application. Accordingly, the social skills training program called "Ready to Learn", which was adapted to the Turkish language and made available for practice-based use, was gained in the relevant literature as a source for developing the social skills of the children in Turkey. In this direction; the aim, content, and strategies of the program are presented in the following section. All these stages, described in this scope so far, were summarized in Figure 1.

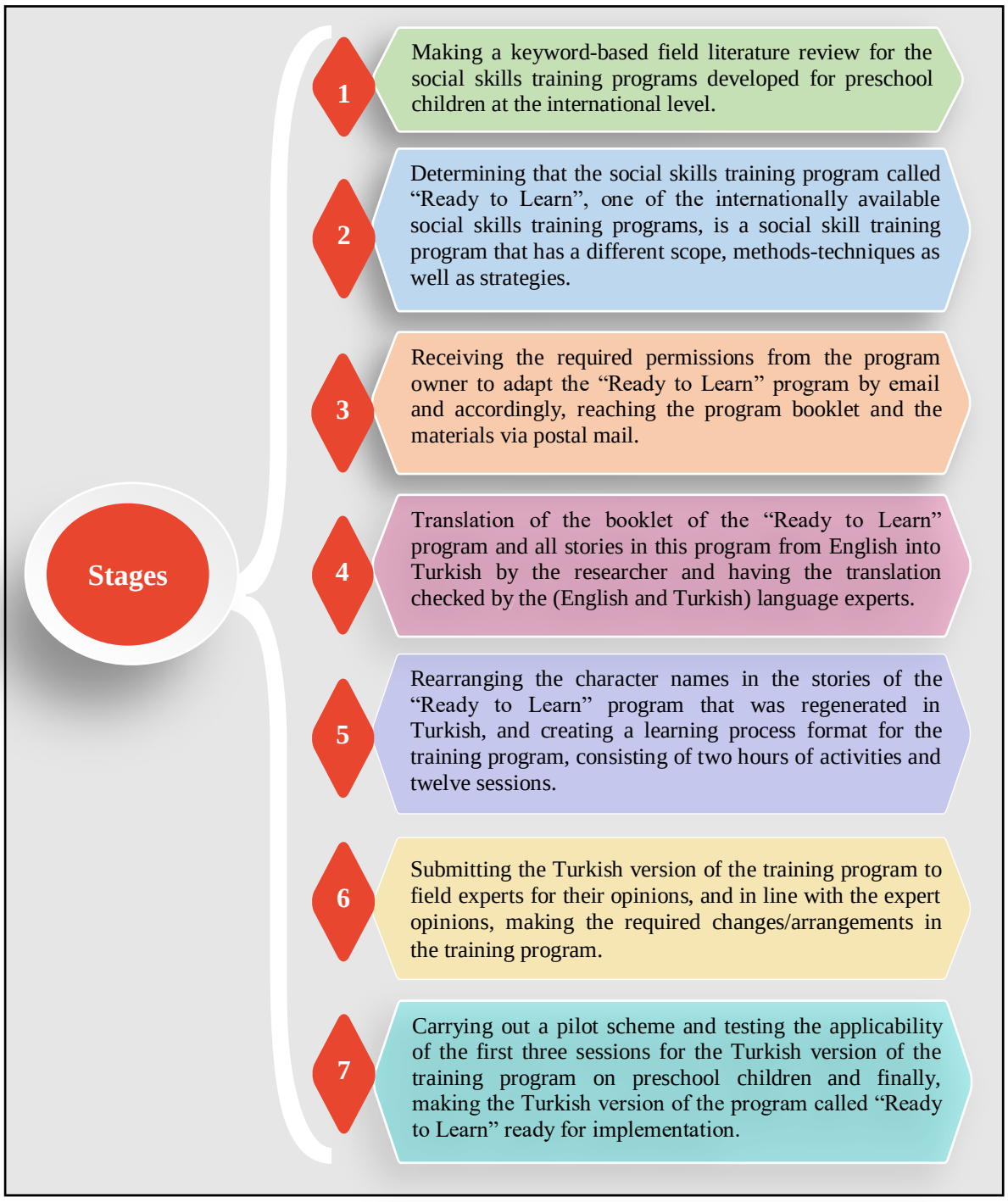

Figure 1. The Stages Carried out in the Scope of the Study

An Overview of the Training Program Addressed in the Study

In this section; the purpose, scope, and strategies of the social skills training program addressed in the study are explained. These situations and explanations are based on the information contained in the program's teacher manual handled by Brigman, Lane, & Lane (1994). The information in this direction is as follows.

Purpose and Scope of the Training Program

The training program called "Ready to Learn" is a classroom-based program was developed by Brigman, Lane, & Lane (1994) and was translated and adapted to the Turkish language by the researcher as translated "Öğrenmeye Hazırım" in the scope of this study.

The original version of this program was developed over seven years. The theoretical foundation of the program called "Ready to Learn" is based on the learning model of Carkhuff, who argued that learning requires prerequisite skills (Carkhuff, 1969; Carkhuff, 1983), and the idea of Adler that suggests the necessity for social competence (Adler, 1998). These two ideas form the basis of the academic education and social skills training contained in the program. In this process, it is stated that the previous researches on learnings in early childhood were reviewed extensively; and the elements of the program were tested many times on children, conducting constant interviews with early childhood period experts, psychologists, school guidance services, school administrators, and program experts, as well as preschool, kindergarten, and first-grade teachers. For this reason, the mentioned program that is based on a wide research foundation is explained as a preventive program and when used before facing a problem.

This program was developed for children aged four to seven to gain the social skills and learning skills that are needed for school success. The program focuses on the competencies that should be acquired before the more complicated skills such as reading, writing, and mathematics. These competencies include social skills, paying attention, and listening comprehension; as well as cognitive strategies such as understanding the structure of the story and asking effective questions. This program is regarded as a story-based social skills training program for children aged four to seven.

The program called "Ready to Learn" includes social cooperation activities to contain the use of "big books" that are read aloud, storytelling by teachers and children, activities of drawing, dramatic play, puppet, and song, activities on listening and attention, practices for understanding directions through story structures, as well as discussion and interaction. This program consists of a series of stories about "Fuzzy (renamed as "Puf Puf") and his friends". The characters mentioned as "Fuzzy and his friends" in the series of the stories were renamed as "Puf Puf and his friends" in the Turkish version of the training program. Puf Puf is a caterpillar that later in the story transforms into a butterfly. Puf Puf and his friends essentially teach children important learning skills/social skills such as paying attention, listening, and understanding, asking key questions to increase comprehension, encouragement of self and others, working/studying in cooperation, and establishing empathy.

The content, strategies, and activities of the training program are contained in a book written by the program developers (namely, Brigman, Lane, & Lane, 1994), and this book consists of ten chapters. The introduction chapter of the training book includes how the program was developed, the program's importance and contributions, materials, group discussion skills, a review of the learning process, and an example of a weekly plan. In this scope, *the first chapter* mentions the activities and learning process related to the story named "Puf Puf and the Time of Great Change"; *the second chapter* mentions the activities and learning process related to the story named "Puf Puf and the Secret of Flowers"; *the third chapter* mentions the activities and learning process related to the story named "Puf Puff and the Daring Rescue"; *the fourth chapter* mentions the activities and learning process related to the story named "Puf Puff and the Final Lesson"; and the *fifth chapter* mentions the activities and learning process related to the story named "Puf Puff and the Great Migration". Following these, *the sixth chapter* presents research summaries and theoretical framework; *the seventh chapter* presents four learning skills (paying attention, listening and understanding, asking effective questions, and encouragement/self-regard); *the eighth chapter* presents five teacher strategies (modeling, coaching, and clueing, student/child storytelling, student/child story re-telling, positive peer reporting, and encouragement council), followed by *the ninth chapter*, which presents encouraging/friendly things that the teacher and children can do/say, and finally, *the tenth chapter* presents the parent education newsletters.

The "Ready to Learn" program is established on five stories. These are as follows:

(1) The story named "Puf Puf and the Time of Great Change" is about the skills such as attention, listening and understanding, asking questions, encouragement of self and others.
(2) The story named "Puf Puf and the Secret of Flowers" focuses on paying attention.
(3) The story named "Puf Puf and the Daring Rescue" addresses the importance of listening and understanding.

(4) The story named “Puf Puf and the Final Lesson” focuses on the skills of asking effective questions.
(5) The story named “Puf Puf and the Great Migration” centers on encouraging self and others.

In the general story, Puf Puf is a caterpillar who, due to his off-task behavior, fails to learn how to spin a cocoon to turn into a butterfly. Activities are conducted for the supplement stories to develop certain learning and social skills in the program, in addition to the main stories about “Puf Puf and his friends”. Four new forest friends of Puf Puf teach him the prerequisite learning skills such as paying attention, listening, and understanding, encouraging himself and others, so Puf Puf can learn to build his cocoon and complete his "big change". In the following four stories, it is emphasized that Puf Puf uses these skills to become a successful butterfly and helps also others learn these skills. In this way, children are taught the importance of effective communication/social skills, learning skills, helping/encouraging others through metaphorical transfers.

Activities are conducted for the support stories to develop social skills in the program, in addition to the main stories about “Puf Puf and his friends”. In this scope, the original version includes the stories named “The Little Pigs”, a world’s classic, “The Giving Tree”, the work written by Shel Silverstein, and "Alexander and the Terrible, Horrible, No Good, Very Bad Day”, work written by Judith Viorst. While adapting the program to Turkish, it was ensured to use the stories in two different books named “I Am Very Angry” (one of the stories written by Aysen Oy) and “All Toys Are Mine” (written by Aytül Akal) instead of the other two stories (as mentioned for “The Little Pigs”, and "Alexander and the Terrible, Horrible, No Good, Very Bad Day”), as these stories address the skills in the contents of the others.

This training program includes audio CDs that allow children to listen to the five stories read and that contain each one of the studies. The teacher makes children listen to the CDs about the stories read during the day and ensures the reinforcement of the skills included in the stories. In addition to this, after reading each story and answering the questions about the story, a drawing activity takes place in the program. In this scope, children are asked to draw/paint their favorite character/chapter in the story, what happens at the beginning/middle/end of the story, and how Puf Puf feels at the beginning/middle/end of the story in each session, based on teacher's instructions. Afterward, children may be asked to describe their drawings to the classroom and are allowed to take the drawings home at the end of the day. In this context, the program in question is based on the principle of listening to the existing stories, performing activities related to them, and then using certain strategies together at the same time.

Strategies of the Training Program

The training program called “Ready to Learn” is a skills-building program in which various activities are carried out based on the stories read/listened to, and children are first told about social skills and learning skills with stories, and then children are given the opportunities to exhibit these skills through five teacher strategies including speaking, listening, thinking, and vitalization. These five teaching strategies are;

(1) modeling-coaching-cueing,
(2) student story-telling,
(3) student story retelling,
(4) positive peer reporting,
(5) encouragement council activities. Each of these strategies is described below:

Modeling: In the program, the teacher acts as a model verbally or non-verbally to support the specific behaviors taught. It is stated that if the teacher continues to be a model for these behaviors (attending, listening, asking questions, and encouragement), children will be motivated to practice these new skills and behaviors, and if the teacher informs the classroom when he/she observes that children are using any skill, it will accelerate the learning process. The teacher is considered an important model for the behaviors included in his/her program. At this point, it is recommended that a child be a model for the activity for the group/classroom after the teacher shows, does, and tells how to do the activity.

Coaching: This includes the teacher giving corrective and supportive feedback to the children regarding the target behaviors. Here, the teacher must first state what children are doing right, then tell and show what needs to be changed, and finally conclude his/her explanations with a positive comment.

Cueing: This refers to the visualization of past explanations in mind with very few words. For example, before giving instructions for subsequent readings or activities, the teacher says, “*Right now, I want to see … (as much as the class size) beautiful Puf Pufs*”. He/she happens to give children clues such as (1) "turn to the teacher and come face to face", (2) "look at the teacher", (3) "bend forward slightly", and (4) "liven up and show

interest". In this context, the teacher also expresses which of the children immediately exhibits the aforementioned attendance skills.

Student/Child story-telling: Student/child story-telling is used to help children understand questions and practice paying attention and listening skills. Here, the teacher reads the story included in the daily training program aloud to the children in the classroom, and after the story is completed, the teacher guides the children to tell the story for a while (1-2 minutes) through the 4W & 1H questions (Who, What, When, Where and How), and comments on the attendance behaviors of children that he/she has noticed. It is recommended that the poster containing the 4W & 1H questions be hung in the classroom. A sample poster for 4W & 1H questions is presented in Figure 2.

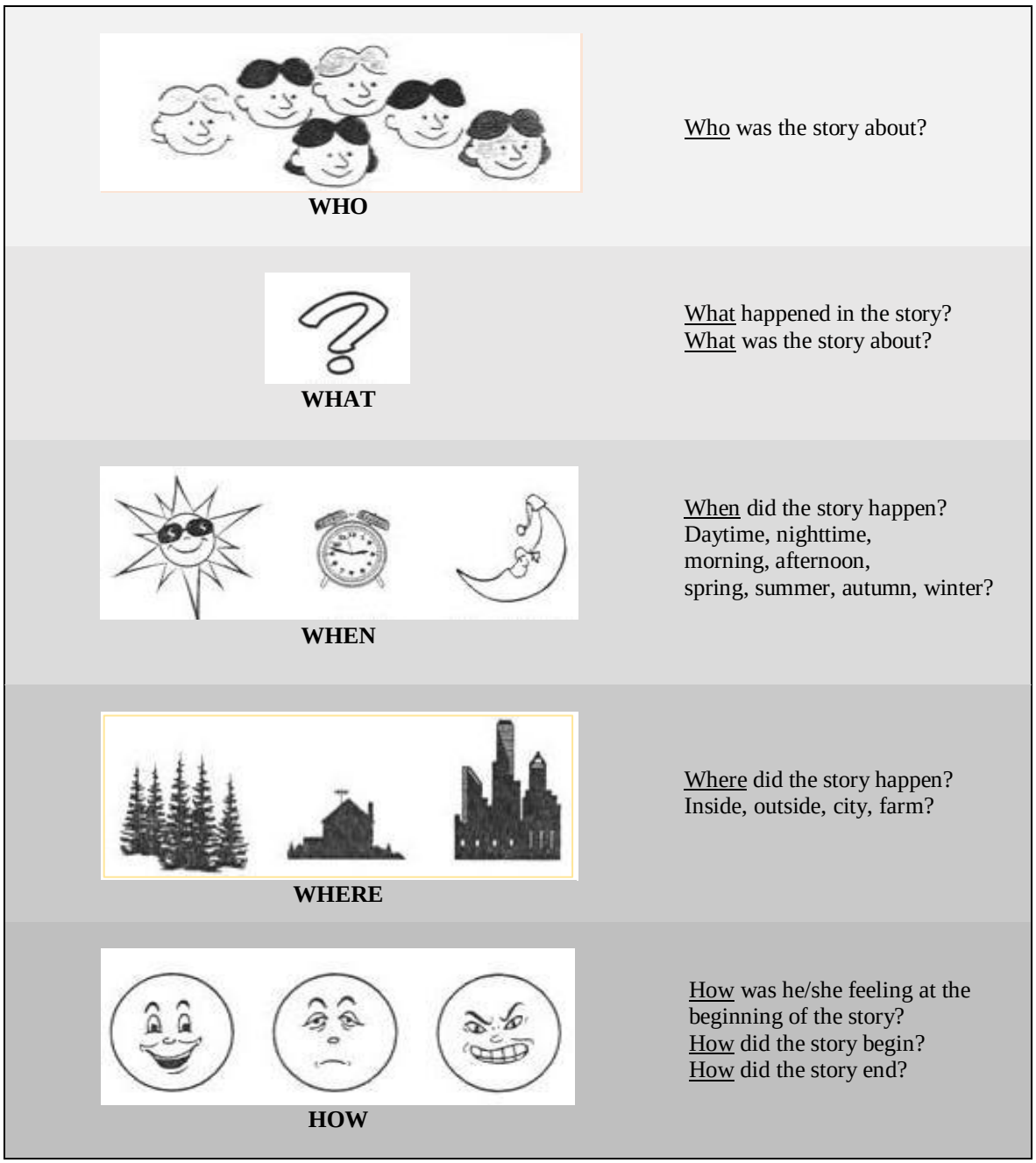

Figure 2. A Sample Poster for 4W & 1H Questions

Student/child story retelling: Student/child story retelling is used to help children understand and review stories read in the daily training program. This strategy includes a good frame to practice sequencing. The following instructions are guiding for story repetitions.

(1) Children are asked to retell the story using the following dialogue. “I have just read a story (the name of the story…). Could you retell this story as if you were telling it to a friend who has never heard it before?"

And the following steps are used when needed.

(2) If children have difficulty in beginning the story, they are asked to begin with "Once upon a time..." or "Once there was...".
(3) If a child stops re-telling the story, he/she is encouraged to continue by asking “What happened next?”
(4) If a child stops retelling and cannot continue to tell the story, questions are asked about the story at points that encourage continuing the story and are suitable for stopping. For example, “What was…..’s problem?”.
(5) When a child is not able to retell or when the sequence and details are missing in his/her story, he/she is encouraged to retell it step by step with the following dialogues
- He/she is told to begin with “Once upon a time …..” or “Once there was…..”
- “Who was the story about?”
- “When did the story happen?” (daytime or nighttime, summer or winter?)
- “Where did the story happen?” (in the city, on the farm)
- “What was the problem of (the main character's name) ….. in the story?”
- “How did he/she try to solve the problem? What did he/she do first, next?”
- “What happened at the end of the story?”
- “How did (the main character) feel at the beginning, middle, and end of the story?” and after the child's answer, the story ends by saying "This is how the story ends here".

While one child is telling the other the story, the other is practicing listening and attendance skills.

Positive peer reporting: It is stated that in the program when children are taught to mind other children paying attention, listening, asking questions, doing and saying encouraging things, and indicating these behaviors to other children, a highly basic encouraging system is also established for them. At this point, it is considered important that the teacher encourages each child when they use the behaviors in the program and children also encourage the others in the classroom. It is argued that with the teacher's practice and guidance, children will spontaneously begin to notice and tell about "something friendly, encouraging, inviting and/or helpful that someone did or said". It is stated that as positive peer reporting becomes a part of the classroom environment, children's prosocial behaviors (such as helping others, helping others feel good, and sharing) and learning skills and the behaviors they report will increase.

Examples for teacher’s explanations for positive peer reporting are as follows:

(1) “During the activity, I want you to examine who pays full attention in your group, who listens carefully, who can ask good questions, and who says or does things to encourage others. At the end of the activity, I will ask each of you to describe what you noticed.”
(2) “Who do you think did or said something encouraging/friendly today? What did he/she do/say?”
(3) “Today, I want each of you to pay attention to who in your group says or does something friendly or encouraging. You can tell them that you like the way he/she behaves when you first notice it. I will ask each of you to share what you noticed in your group at the end of the day. So, try to find something friendly/encouraging that each of your group members says or does.”

Practices are performed by asking the above-mentioned questions or making such explanations and attaching the names of the specified children to the courage corner.

At the end of the day, the teacher wants the children to sit together and share friendly and/or encouraging things they noticed each other saying and doing throughout the day. Here, it is stated that teachers can help children complete activities by using some positive peer reporting initiators. For example;

- Today, I noticed that you did … and I liked it.
- I can tell you that you paid attention, you listened carefully, and so forth. Because you were looking right at me and asking a good question, etc. I really liked it.
- Today, you did/said … that I think was friendly/encouraging. I really liked it.

Encouragement council: Encouragement council meetings are structured classroom discussions that allow children to talk about encouraging skills. It is a preferred approach to start the encouragement council in a small group at the beginning of the training and then to involve the whole classroom. Within the scope of the encouragement council, children are asked to sit in a circle so that everyone can easily see each other's faces. In each session, the teacher is expected to discuss one of the following topics for 10-15 minutes, and children are expected to express their own opinions on the given situation in turn. Some discussion topics are listed below.

- Something that you like about one of your classmates ……
- Something that you like in the school/classroom ……
- Something that you have recently learned ……
- One thing that your classroom has achieved to do recently ……
- One thing someone did for you that helped you feel good this week ……
- Something you did for someone that helped you feel good this week ……..
- Something you do well is ……
- Something you like about yourself ……

Encouragement board: Used to motivate children to notice the friendly or encouraging things others do. It also reminds children of different ways that can be encouraging or friendly and allows children to share good things about each other. Here, the teacher prepares a board with a photograph of each child or a symbol representing him/her and hangs it up somewhere in the classroom determined together with the children. Each child is asked to indicate the name of the friend who did or said something new, which is friendly or encouraging, in their classroom, and what he/she did or said. Then, each child is given a voice in turn, and a "smiling face" (or an encouraging symbol) sign is marked next to the named child. At the end of the day, the encouragement board is a different variation of the positive peer reporting used by the teacher.

Stars of the week: A part of the encouragement board is included in the process as "stars of the week". Towards the end of each session, the teacher shows children a "star" card with the names of a girl and a boy in the classroom written on it, and children are asked to say what they like or appreciate about their friends whose names are written on the card. The teacher encourages all children to comment on the child written on the "star". The child who receives a "star" shaped card takes his/her star home at the end of the day. Here, it is considered necessary to inform each of the children that they will receive a "star" until the end of the session during the first week of the session. After it is made sure that each child gets a "star" once, it is possible to continue it for the second time, if desired (depending on the number of children). The practices within this scope must be carried out in a way that encourages the acquisition of desired behaviors while preserving the elements of a courageous and friendly atmosphere in the classroom. While these processes are being carried out, the teacher is the person responsible for maintaining the balance in the classroom. In this activity, the teacher can be allowed to notice the differences in the abilities of the children to express what they like or appreciate about others.

Parent newsletter: Parent education newsletters are used to help parents understand and reinforce the behaviors and main ideas that are taught through "Puf Puf and his forest friends", and to inform them about important learning and social skills in the program. Owing to the parent newsletters, which are considered as a way to communicate with parents about the training program, parents are ensured to review the program and then to be informed theoretically or practically. Parent newsletters are sent to parents at the end of each session and include informative notes on target behaviors contained throughout the day and examples of activities that they can do with their children. Parents are expected to use the information contained in the parent newsletters delivered at the end of each session in their future communication with their children and to complete the activity examples until the next week.

In addition to all the processes mentioned so far, *group discussion skills* are used in the scope of the training program and it is recommended to integrate these skills in the natural learning and teaching approach. Group discussion skills are also adopted in the scope of the training program, and it is asserted that the effectiveness of the sessions will be increased through the use of these skills as well as the strategies. These group discussion skills are described as personalizing, structuring, modeling, connecting, responding to each comment, involving everyone, and summarizing. It is recommended to integrate these skills in the natural learning and teaching approach. At this point, seven group discussion skills are listed below.

(1) *Personalizing:* At this point, for a small group study, it is recommended that everyone sits in a circle or semicircle so that they can see each other's faces without moving, and that teacher and children use their names when communicating with each other. Here, instructions such as "Let's arrange our chairs in a circle. So, we can all see each other easily" can be used when necessary.

(2) *Structuring:* This skill is used when the topic mentioned in the session digresses to return the discussion to the topic. At this point, it is suggested that the teacher give instructions such as "I want you to think about the things you enjoy doing for a while, then we'll listen to everyone in turn."

(3) *Modeling:* This skill involves the teacher exhibiting the skills that the teacher uses in his teaching attempt in his/her daily behavior. At this stage, the teacher needs to state the behavior that is desired to be exhibited by saying, "I expect ….. from you. Is everybody ready?."

(4) *Connecting:* This skill is aimed at enabling children to share their thoughts and interests with others, and to gain a sense of acceptance and belonging. At this point, it is stated that it is possible to connect a link between the explanations of the participants by asking questions such as "Who else has experienced a similar situation?", "How many of you have felt this way before?" or, as another way, by saying, "What ….. (child's name) says is similar to what ….. (child's name) has said before."

(5) *Responding to each comment:* This skill is used to encourage participation by acknowledging the responses or comments from children. It is stated that it is necessary to respond to the comments by using children's names such as "Okay….. (child's name) thank you. ….. (child's name), how about you?."

(6) *Involving everyone:* It is possible to give everyone a voice by using two techniques as "hand-rise" and "go-'round" in a session. Here, when the technique of "go-'round" is used, some time is given to think before beginning, and the teacher says "I will come back to you later" for a child who does not respond when it is his/her turn. In addition to these, nonverbal communications such as making eye contact, nodding head, and being interested in each comment are emphasized.

(7) *Summarizing:* This skill is intended to support the purpose of the discussion processes and it is used during the discussion as well as at the end. It involves the teacher or children summarizing the skills learned in each session. Here, the teacher allows children to summarize through the questions such as "We are getting closer to the end of time and I want you to think about what we have talked about. What are some of the things we have talked about?" towards the end of the session. Children are given a short time to think and are allowed to explain what they have learned or repeated. The learning process is carried out in the company with all these elements included in the program (Brigman, Lane & Lane, 1994).

A Statement on the Implementation of the Training Program

In the process of implementing the social skills training program on children in Turkey, it is very important to implement the activities and strategies included in the program systematically. In this line, it is considered important to give every child an equal right to speak and to address children by their names within the scope of the implementation process. Until the names of the children in the classrooms where the training is carried out are learned by the practitioner(s)/educator(s), steps can be taken to support the self-esteem of the children and create a positive classroom climate through the ways such as putting name cards on the children's collars within the sessions. It should not also be neglected to inform parents about the importance and content of the training program implemented in the educational environment and what is expected from them during the implementation process. Before starting the implementation, it should be well known that the processes for spending time in the same environment together with children (to carry out some activities and/or support the existing activities) independently of the content of the training program, to ensure that the practitioner(s)/educator(s)/research(s) know the environment where the training will take place and to facilitate the adaptation of children to the process, will also contribute to the functionality of the training.

Discussion and Recommendations

This study shares the steps, as well as information and findings, towards the researcher's Turkish translation of a classroom-based training program called "Ready to Learn", designed by Brigman, Lane, & Lane (1994) for the development of prerequisite learning skills and social skills and towards its the strategy of implementation on the preschool children in Turkey.

It was determined that the training program adapted into Turkish within the scope of the study includes story activities and many teaching strategies that can create an alternative to Turkey's preschool education applications of the application examples in the United States, where this training program was developed. In addition to this, while it is expectable that there would be differences in the educational understanding and educational practices adopted by the countries, it is also possible to encounter partial differences in their

contents within this framework. The activity of creating a story using letters in the training program, which is the focus of this study and is based on children between the ages of four to seven, is an example of direct reading and writing. In Turkey, within the scope of the Ministry of National Education (2013) preschool education program, preschool children are not made to read and write directly from the text, instead, preparatory studies for reading and writing (such as phonological awareness) are carried out. In this direction, it can be said that it is possible to encounter different examples of implementations due to the difference in the education legislation of the countries. It is seen that educational programs have content that is suitable for the norms of the country in which they are developed, besides, it is also known that the social skills that preschool children need in their development and learning are universal. It is needed that preschool children learn skills such as communicating, expressing their feelings, asking questions, listening carefully, leading, and being courageous to support cognitive and social development areas of preschool children (as emphasized by Brigman, Lane, & Lane, 1994). The fact that the "Ready to Learn" training program includes stories, activities, and strategies aimed at developing social skills such as paying attention, listening, and understanding, asking questions, encouraging oneself, and others are also processes that will contribute to supporting the development of children in this direction.

Together with the view that children may have different fields of interest and learning styles, great importance is attached to learning processes carried out with different learning strategies. Since the social skills training program called “Ready to Learn” is a story-based program, the skills that are aimed to be gained are supported with the elements included in the stories read, accompanied by teacher strategies. In this scope, a child senses the situations between the butterfly, who is the main character of the story, and his mother and his forest friends, and exhibits identification with the butterfly, which is told to have spun its cocoon when it exhibits appropriate behaviors. In a study conducted by Isbell, Sobol, Lindauer, & Lowrance (2004) on three-four age groups, it was determined that the stories read to children have a positive effect on their language development and that children benefit from pictures in the narratives related to the stories. After explaining social skills and learning skills through stories in the training program called "Ready to Learn" that is discussed in the study, its application through the use of five teacher strategies including speaking, listening, thinking, and visualizing is an example of the interactive storytelling process. Crawford (2006) determined that language skills of children can be greatly improved through the fact that the parents who have children in preschool period learn the interactive book reading strategies, and Moody (2007) determined that reading from a traditional storybook is more effective compared to reading from an electronic storybook on the communication skills of children aged three to six years. In another study conducted in recent years (Schapira, & Aram, 2019), it was emphasized that interactive book reading is important in terms of the social-emotional competencies of preschool children. Parallel to these, the function of the program called “Ready to Learn” on communication skills is highlighted as it is a program that contains processes based on the use of five big story-books that are read aloud.

The fact that activities are conducted through the strategies such as "modeling, coaching, and clueing", "student/child storytelling", "student/child story retelling", "positive peer reporting", "encouragement counsel" and "stars of the week” in the social skills training program called "Ready to Learn", which is discussed in the study can be considered as an expression that the program has a multidimensional feature. It can be said that the activities carried out based on these strategies will contribute to the development of children's social skills such as expressing one’s emotions, assertiveness, recognizing one’s strengths and weaknesses, and complimenting others, as well as the development of the skills such as listening carefully and expressing what they listen to properly. At this point, the fact that the mentioned features are the individual features in the direction of current educational approaches also emphasizes the importance of the program. Nicolopoulou et al. (2015) determined that story-based activities contribute to the development of preschool children in the dimensions of spoken language, early literacy, and social competence. The study of Yahya Mahmoudi, Naseh, Salehi, & Tizdast (2013) also revealed that group story-based social skills training has a positive effect on external behavior problems. The fact that the program in this context includes both story-based activities and various learning strategies can be considered as an indicator that it will be supportive in developing skills and behaviors in the different areas of children’s development.

The scope of the story-based social skills training contains processes based on answering questions about the stories and children telling stories that answer the "Who", "What", "When", "Where" and "How" (4W & 1H) questions, along with the stories read. These processes may facilitate the acquisition of skills such as making eye contact while speaking, using gestures and facial expressions appropriately, answering questions about emotions correctly, and answering questions asked. As determined by Wasik & Bond (2001), reading books to children and asking them open-ended questions about the story contribute to the development of children's expression skills. In addition to these, following the stories read and the questions answered in the training program, children drawing pictures for some situations based on the content of the story (their favorite characters/chapters in the story, what happened at the beginning/middle/end of the story, and what the characters

felt at the beginning/middle/end of the story) are also the processes for the development of expression skills in different ways. The contribution of children's drawings on children's social-emotional, personality, and spiritual development is the focus of many studies (For example; Farokhi, & Hashemi, 2011; Harrison, Clarke, & Ungerer, 2007; Kendrick, & Mckay, 2004). Philip (2018) also emphasized that the use of visual thinking strategies through the questions such as "What is going on in this picture?", "What made you think that?", "What else could it be?" is important for the social skills of preschool children. Besides all these, informing parents about the target behaviors during the day and letting them know about the activities they can carry out with their children through the parent newsletters, which are also prominently included in the Turkish version of the training program, is encouraging for family participation. It is more and more acknowledged day by day that parent supported/centered training programs improve parent-child interactions and increase social skills of children (Adams, Womack, Shatzer, & Caldarella, 2010; Çağdaş, Arslan, Erbay, & Orçan, 2010; Göktaş, & Gülay-Ogelman, 2016; Powell, Son, File, & San-Juan, 2010).

The processes described in this study can be used as an alternative learning process for activities such as storytelling/story reading, story creation, role-playing a story, and retelling a story within the scope of the Turkish activity to be carried out based on the learning outcomes and learning objectives in the MoNE (2013) preschool education program, which is a guiding resource in preschool education delivered in Turkey. In line with this study, the social skills training program that has been brought to the national literature in line with this study is expected to contribute to the enrichment of the activities in preschool education in terms of the structure and scope of the training program. It is recommended for the educators/practitioners and researchers to benefit from some of the existing features of training programs like this study from theory to practice at the point of supporting the social skills of preschool children. As an alternative to the social skills training programs developed nationally, the adoption of a holistic approach can be supported at the point of increasing the quality of preschool education by reviewing the programs adapted from international literature like this study in terms of purpose, scope, and strategies. The training program called "Ready to Learn", which was developed outside of Turkey and translated into Turkish and adapted for preschool children in Turkey by the researcher, can be used as a resource that can be applied at the point of eliminating the deficiencies in social skills and learning skills, on the condition that its utilization permits are fulfilled and application competency is achieved. It is recommended that experts, education administrators, and education program practitioners in the field of preschool education fulfill their responsibilities with great sensitivity and follow up-to-date studies on this subject to achieve a country-based standard in the behaviors involving the social skills of preschool children. At this point, it should be ensured that all stakeholders of education, especially preschool teachers, participate in educational services to be carried out in cooperation with relevant institutions and organizations so that they have knowledge and experience about social skills training and related training programs and practices. Workshop studies can be conducted in different provinces to raise awareness among preschool teachers about the features, implementation processes, and strategies of various training programs with proven effects, such as the training program described in this study, and the contributions of training programs in this direction can be made much more widespread.

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