INVESTIGATION OF CYBERBULLYING AND CYBERVICTIMIZATION SITUATIONS IN ADOLESCENTS IN TERMS OF COPING AND ALEXITHYMIA [*]

(Araştırma Makalesi)

Bünyamin ATEŞ [**] - Alican KAYA [***]

Abstract

This study examines the adolescents' cyberbullying and victimization situations in terms of coping and alexithymia. The research group consisted of 420 students, 207 female, and 213 male, studying in the province of Ağrı in the 2018-2019 academic year. Cyberbullying and Victimization Scale, Coping Scale, Alexithymia Scale, and Personal Information Form were used to collect the data. Descriptive statistical measures (frequency and percentages) multiple regression analyses were used in the study. As a result of the research, adolescents' coping strategies significantly predicted cyberbullying and cybervictimization. Besides, alexithymia significantly predicted cyberbullying and victimization.

***Keywords:** Cyberbullying, Cybervictimization, Alexithymia, Coping, Adolescents.*

Ergenlerde Siber Zorbalık ve Mağduriyet Durumlarının Başa Çıkma ve Aleksitimi Açısından İncelenmesi

Öz

Bu çalışmanın amacı, ergenlerinde siber zorbalık ve mağduriyet durumlarının başa çıkma ve aleksitimi açısından incelemektir. Araştırma grubu, 2018-2019 eğitim-öğretim yılında Ağrı ilinde öğrenim görmekte olan, 207'si kız 213'ü erkek olmak üzere, 420 öğrenciden oluşmaktadır. Verilerin toplanmasında "Siber Zorbalık ve Mağduriyet Ölçeği", "Başa Çıkma Ölçeği", "Aleksitimi Ölçeği" ve "Kişisel Bilgi Formu" kullanılmıştır.

**) Doç. Dr., Erzincan Binali Yıldırım Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Bölümü Psikojik Danışmanlık ve Rehberlik Ana Bilim Dalı, (e-posta: bunyaminates81@gmail.com) ORCID ID: https://orcid.org/0000-0003-4090-1922

***) Arş. Gör., Ağrı İbrahim Çeçen Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Bölümü Psikojik Danışmanlık ve Rehberlik Ana Bilim Dalı, (e-posta: akaya@agri.edu.tr) ORCID ID: https://orcid.org/0000-0003-2933-0161

Yapılan araştırmada; ergenlerin başa çıkma stratejilerinin siber zorbalık, mağduriyet ve aleksitimi durumlarını anlamlı bir düzeyde yordadığı sonucuna ulaşılmıştır. Ayrıca bu araştırma sonucunda, aleksitimi düzeyinin siber zorbalık ve mağduriyet durumlarını anlamlı düzeyde yordadığı saptanmıştır.

Anahtar Kelimeler: *Siber Zorbalık, Siber Mağduriyet, Aleksitimi, Başa Çıkma.*

1. Introduction

Human beings, social creatures, interact with other people and experience different lives. From birth to death, human beings are affected by the environment and affecting the environment. As a result of the interaction of people with their environment, some positive experiences can arise (Ülker & Recepoğlu, 2013; Polat & Çelebi, 2019; Yersel & Durualp, 2019). On the other hand, due to these interactions, negative experiences can also occur in some cases (Ceyhan, 2011; Duyan & Yildiz, 2019; Hughes et al., 2019; Leemis et al., 2019). One of these negative experiences is bullying behavior. Bullying is all the perpetual and abrasive behavior of a person for the gains and interests they can obtain for themselves or persons who are stronger physically, psychologically, socially, or in any other way, to those who are less intense than themselves (Besag, 1989; Olweus et al., 1999; Roland & Munthe, 1989). The relationship or causal effects of bullying situations with many adverse situations and psychopathology on individuals (Graziano et al., 2019; Li et al., 2019; Mukherjee et al., 2019). According to Olweus (1993), bullies need to take control of other students and do what they want. *Bullying* can be defined as deliberate and repetitive aggression towards others through computers, mobile phones, and other devices (Smith et al., 2008; Tokunaga, 2010). The concept of cyberbullying is emerging as a particular type of bullying.

When the definitions of cyberbullying are examined, it can be said that the common points are an imbalance of power between the bully and the victim, as well as e-mail, virtual chat rooms, social communication, and messaging networks used in virtual areas as bullying tools (Ates et al., 2018). Cyberbullying is more dangerous than traditional bullying (Ates et al., 2018). Since, In traditional bullying, the relationship, variety of interaction, and condition between the bully and the victim is more limited than cyberbullying. Moreover, In cyberbullying, people continue to be affected by cyberbullying even if they move away from online communication networks, games, or other digital-based networks. Cyber victims may encounter more bullies than traditional bullying in cyberbullying (Akca & Sayımer; 2017; Pereira et al., 2016). In addition, considering that cyberbullying can be done with widely used communication tools such as mobile phones, it can be said that it is more dangerous and more exposed than traditional bullying (Patchin & Hinduja, 2006). Because of such dangers, bullying has been the subject of many studies and has attracted the attention of researchers in many countries (Baldry et al., 2019; Chan & Wong, 2019; Gaffney et al., 2019; Smith, 2019; Uzun & Karataş, 2019). Cyberbullies are the people who act, and the situations of those bullied are not the same either. Hence they will be different in the situations that may arise. Cyber victim, on

the other hand, is the physical, social, economic, and psychological victim of one or more groups through information and communication technologies in a way that emphasizes the personality of one or more groups and targets everything else that reflects it (Arıcak et al., 2012; Wang et al., 2010). It can be stated that victims of bullying try to cope with the problems arising from cyberbullying in many areas of their lives. It can be said that these people experience a decrease in their academic achievement, and they face many academic problems. Besides, cyber victimization situations and consequently some psychopathologies are experienced due to cyberbullying. The emotionally destructive behavior of cyberbullies towards victims may be associated with another phenomenon called alexithymia, which can occur in emotional interaction.

One of the these new phenomenons is Alexithymia. It means "a: no, lexis: word, thymos: feeling" respectively (Dereboy, 1990). It can also be translated into Turkish as "absence of words for emotions" or "deafness to emotions" (Sayar & Acar, 2001). Sifneos derived the word in 1972 (Koçak 2002). Alexithymia; is a cognitive and emotional disorder that expresses the difficulty in expressing and describing emotions of children and adults in a meaningful way (Way et al., 2007). Freyberger (1977) conceptualized two different types of alexithymia. It can be said that these two species emerge in their theoretical etiology. Individuals with alexithymia have trouble understanding emotions and responding appropriately to questions about their emotions or the emotions of others. They tend to focus on physical responses because they have trouble distinguishing between physical and emotional responses (Zackheim, 2007). Another critical characteristic of alexithymia is the limited ability to dream. People with alexithymia rarely daydream and lack dreaming even when they are awake (Koçak, 2002; Taylor et al., 1997; Zackheim, 2007). Individuals with a high level of alexithymia experience communication barriers, leading to unwanted experiences. It may cause the individual to have difficulties coping with some of the negativities encountered in life. As a natural consequence of this situation, the importance of coping skills for these individuals emerges. Coping; includes all of the cognitive, affective, and behavioral responses that can enable the individual to withstand this situation in the face of events or situations that may cause stress or trauma (Folkman & Lazarus, 1988; Lazarus & Folkman, 1984). When the literature is examined, the word coping appears as "coping" in English. In addition, the origin of the word comes from the word "kolahos" in ancient Greek, and its meanings are "to meet, to come across or to bump" (Eryılmaz, 2009). Coping refers to behaviors that help people deal with psychologically adverse social experiences (Pearlin & Schooler, 1978). Coping strategies can be classified under two main headings. Coping strategies can be grouped under two main headlines. The first is problem-focused coping strategies, and the second is emotion-focused coping strategies (Folkman & Lazarus, 1988). Individuals' styles of coping with stress, making sense of stressful situations, and re-evaluation processes are vital. Therefore, it is vital to understand the coping process and know the characteristics of coping styles (Lazarus & Folkman, 1984). According to Lazarus and Folkman (1984), a stressful situation is thought to have four main characteristics. These are characteristics of the person, perception of the stressful situation, cognition, and behavioral response

used to deal with the situation or event that causes the stress, respectively. It is possible to say that these factors will affect the coping style chosen to deal with stressful situations such as cyberbullying.

This study examines alexithymia and coping variables that predict cyber victimization and cyberbullying levels. Depending on this purpose, the answer to the questions has been sought.

Do alexithymia predict adolescents' cyber victimization and cyberbullying levels at a significant level?

Does coping predict adolescents' cyber victimization and cyberbullying levels at a significant level?

2. Method

2.1. Research Model

The research examines the effects of adolescents' coping strategies and alexithymia on cyberbullying and victimization situations. This research is conducted based on the relational screening model. This model is a research model for determining the presence or degree of mutual exchange between two or more variables (Karasar, 2014; Sata, 2020).

2.2. Sample Group

The study group consisted of 420 high school students (adolescents), 213 (50.7%) male, 207 (49.3%) female, 275 (9-grade level), 42 (10-grade level), 39 (11-grade level), and 64 (12-grade level) who continue to education at high school level in Ağrı province in 2018-2019 academic year. The distribution is given in Table 1. The age range of the research group was 13-18.

Table 1. Distribution of Research Groups by Gender

Gender	*N*	*%*
Male	213	50.7
Female	207	49.3
	9	65.50
Grade Level	10	10.50
	11	9.30
	12	15,20
Total	420	100

2.3. Data Collection Tools

Demographic Information Form

It is a form developed by researchers to determine socio-demographic characteristics such as mother's education level, father's education level, education level, perceived socioeconomic level, and the types of activities.

Cyber Victim and Bullying Scale (CVBS)

The Cyber Victimization and Cyberbullying Scale developed by Çetin et al., (2011) consists of 2 parallel forms that measure cyberbullying situations (CVS) and cyberbullying (CBS) experiences. It has 22 questions in each form and three different sub-dimensions: Cyber-linguistic bullying/victimization "CLB", identity concealment "IC" and cyber counterfeiting, "CC". The scale is 5-point Likert type. The internal consistency reliability coefficient was found to be .89 for CVS. In addition, the internal consistency coefficients of the CVS were found to be .86 for the CC subscale, .80 for the CLB subscale, and .68 IC subscale. The internal consistency coefficient of CBS was determined as .89. Internal consistency coefficients of sub-dimensions of CBS were determined as .83 for CC, .81 for CLB, and .69 for IC. Within the frame of this study conducted on university students, the Cronbach Alpha reliability coefficient was determined as .91 for the scale.

Within the scope of this work carried out; The Cronbach Alpha reliability coefficient for the cyber victimization form of the scale is 0,92 and 0,89 for the cyber bullying form. In order to determine the criterion-related validity of the scale, the Aggression Scale adapted into Turkish by Can (2002) was used. Correlation coefficients between CVBS and Aggression scale were found as .27 for CVS and .36 for CBS. The correlation coefficients between the Aggression Scale and the sub-dimensions of the CVS were determined as .27 for CC, and .20 for CLB and IC. Correlation coefficients between sub-dimensions of CBS were determined as .40 for CC, .22 for CLB and .26 for IC. Fit indices of the model in confirmatory factor analysis are; The fit index values of the SME are RMSEA = .058, NFI = .94, CFI = .96, IFI = .94, RFI = .93, GFI = .90 and NNFI = .96, and the fit indexes of CBS are RMSEA =. 056, NFI = .95, CFI = .97, IFI = .95, RFI = .94, GFI = .91 and NNFI = .97 (Çetin et al., 2011).

Coping Strategies Scale for Adolescents

The scale was developed by Spirito *et al.* (1988). It was adapted by Bedel, Işık and Hamarta (2014). It consists of 11 items; the scale also includes three dimensions. These are respectively; Active coping (Items 3-6-8-10), Avoiding coping (Items 1-2-9-11), and Negative coping (Items 4-5-7). The scale form is a 4-point Likert type. The range of scores obtained from the scale is between 11 and 44 points. The internal consistency reliability coefficient of the coping scale for adolescents was found to be .72 for Active Coping, .70 for Avoided Coping, and .65 for Negative Coping. The test-retest reliability coefficient, evaluated at three-week intervals, was found to be r = .66 for Active Coping, r = .61 for Avoided Coping, and r = .76 for negative Coping. Cronbach Alpha reliability coefficient in this study was found to be .78.

Toronto Alexithymia Scale

The reliability and validity study of the Toronto alexithymia scale developed by Bagby et al., (1997) was conducted by Güleç et al. (2009). The scale is a 5-point likert type self-rating scale. Items 4, 5, 10, 18 and 19 are scored in reverse. The scale consists of 3

subscales. The Difficulty Identifying feelings subscale consists of seven items (items 1, 3, 6, 7, 9, 13, and 14) and is defined as difficulty describing feelings and externally-oriented thinking. Furthermore, the difficulty describing feelings subscale consists of five items (items 2, 4, 11, 12, and 17). The externally-oriented thinking subscale consists of eight items (items 5, 8, 10, 15, 16, 18, 19, and 20). In this study, the Cronbach Alpha reliability coefficient was found to be .84.

Personal Information Form

It was created based on the principle of confidentiality within the frame of this research so as to learn the personal information of the adolescents that make up the sample group.

Collection of Data

After obtaining permission for the research, the research group was determined. In determining the research group, although the simple random sampling method was taken as a basis, adolescents' volunteering was also taken into account. During the data collection process, after determining the appropriate hours and explaining the research to the adolescents, data collection tools were applied to the research group in groups. The data collection process took approximately 45 minutes.

Analysis of Data

Descriptive statistical measures (frequency and percentages), simple linear correlation, confirmatory factor analysis (CFA), and multiple linear regression analysis were used in data analysis, respectively. Before performing the multiple regression analysis, the conditions of meeting the assumptions of the relevant analysis were examined. First, the ZPRED-ZRESID graph was examined to determine the normal distribution of the differences between the predicted values and the observed values. It was determined that this graph was in the form of an elipse; that is, the residual values showed a normal distribution. When the graphs were drawn to determine whether the relationship between the predictor variables and the predicted variable is linear, which is the second assumption, it was found that this assumption was met. For the third assumption, the multicollinearity problem, the VIF and tolerance values were examined, and it was seen that the VIF values ranged from 3.703 to 4.892. The tolerance values varied between 0.204 and 0.266, and it was determined that there was no multicollinearity problem between the predictor variables. The skewness and kurtosis values were examined to determine if the predicted variable, which is the last assumption, has a normal distribution. When the skewness and kurtosis values were examined, The skewness and kurtosis coefficients for the items were between $-1,5$ and $+1.5$; it was seen that the predicted variables had a normal distribution.

Ethics of Research

The necessary permissions to carry out the research were obtained from the Ağrı National Education Directorate with a research permission letter. Participants were asked

whether they would like to participate voluntarily. Non-volunteer participants were not included in the study. In addition, the research was carried out by universal values and the Helsinki declaration.

3. Results

In the findings part of the research; First, the arithmetic mean and standard deviation values for the variables, the simple correlation analysis coefficients for the variables, and finally, the multiple linear regression analysis (standard) results were reported. The arithmetic mean and standard deviation values for the variables are given in table 2.

Table 2. Arithmetic Mean, Standard Deviation, Skewness and Kurtosis Values

	Factors	N	$\bar{X}$	S	Skewness	Kurtosis
Cybervictimization	Cyber-linguistic victimization	420	18,79	5,92	0,66	0,69
	Identity concealment victimization	420	12,33	5,06	0,51	-0,49
	Cyber counterfeiting victimization	420	26,47	8,03	-0,20	0,18
	Cybervictimization	420	57,59	17,14	0,47	0,38
Cyberbullying	Cyber-linguistic bullying	420	24,27	4,76	-0,25	1,14
	Identity concealment bullying	420	18,40	4,50	-0,44	-0,51
	Cyber counterfeiting bullying	420	34,25	7,59	-0,15	0,14
	Cyberbullying	420	76,92	14,73	-0,21	0,63
Coping strategies	Active coping	420	15,56	2,02	0,94	1,21
	Avoiding coping	420	7,78	1,74	0,32	0,13
	Negative coping	420	4,91	1,42	-0,12	-,13
	Coping strategies	420	25,48	6,34	0,29	0,60
Toronto Alexithymia	Difficulty Identifying feelings	420	15,87	6,34	0,18	1,28
	Difficulty describing feelings	420	12,27	3,70	-0,13	-0,13
	externally-oriented thinking	420	20,99	6,35	-0,62	-0,63
	Toronto Alexithymia	420	49,13	13,71	0,07	0,71

When Table 2 is examined, the arithmetic means of sample group; cyber linguistic victimization ($\overline{X}$=18.79), concealment victimization ($\overline{X}$=12.33), Cyber counterfeiting victimization ($\overline{X}$=26.47) and total cyber victimization ($\overline{X}$=57.59). Cyber linguistic bullying ($\overline{X}$=24.27), Identity concealment bullying ($\overline{X}$= 18.40) Cyber counterfeiting bullying ($\overline{X}$= 34.25) and total cyber victimization ($\overline{X}$= 76.92).

Table 3. Simple Correlation Analysis Coefficients Regarding the Variables

Correlations			
Cybervictimization Scale (CVS)			
	CLV	ICV	CCV
CLV	--	0,545**	0,570**
ICV	--	--	0,657**
CCV	--	--	--
Cyberbullying Scale(CBS)			
	CLB	ICB	CCB
CLB	--	0,587**	0,627**
ICB	--	--	0,677**
CCB	--	--	--
Toronto Alexithymia (TA)			
	DIF	DDF	EOT
DIF	--	0,599**	0,463**
DDF	--	--	0,610**
EOT	--	--	--
Coping strategies (CS)			
	AC	AVC	NC
AC	--	0,490**	0,219**
AVC	--	--	0,424**
NC	--	--	--

*$p <0.05$, **$p <0.01$ CLV = Cyber Linguistic Victim, ICV = Identification Concealment (Victim), CV = Cyber counterfeiting (Victimization), CLB = Cyber Linguistic Bullying, ICB = Identification Concealment (Bullying), CCB = Cyber counterfeiting (Bullying), DIF = Difficulty Identification feelings, DDF = Difficulty describing feelings, EOT = externally-oriented thinking, AC = Active Coping, AVC = Avoided Coping, NC = Negative Coping, CS = Coping strategies.

When Table 3 is examined, it is seen that all sub-factors of Cyber Victim, Cyber Bullying, Toronto Alexithymia, and Coping Strategies in adolescents scales have significant correlations with each other ($p <0.01$). The statistical significance of the

relationship between the sub-factors of the scales means that these factors can be summed up, and the scale can be expressed with a single total score. Accordingly, in the relevant study, multiple linear regression analysis was used to examine the relationship between psychological structures by taking the total scores of these scales.

Firstly, "Do adolescents' coping strategies predict cyber victimization significantly?" In order to find an answer to the research question asked as follows, the cyber victimization of adolescents is predicted, and coping strategies are included in the model as a predictor variable. Estimates related to the analysis made are given in table 4.

Table 4. Multiple Regression Analysis Results For Predicting Cyber Victimization of Adolescents (Standardized values).

Unstandardized Coefficients			Standardized Coefficients				
Model	**b**	**Std. Error**	**β**	**t**	**p**	**95% CI**	
(Constant)	13,61	10,05	--	1,35	0,177*	-6,15	33,36
AC	1,40	0,46	0,165	3,04	0,003*	0,49	2,30
AVC	1,71	0,58	0,173	2,95	0,000*	0,58	2,84
NC	1,83	0,63	0,152	2,90	0,000*	0,59	3,07
$R = 0{,}25$	$R^2 = 0{,}06$						
$F_{3\text{-}416} = 9{,}39$	$p = 0{,}000*$						

Not: *$p<0{,}05$; AC = Active coping, AVC = Avoiding coping, NC = Negative coping

When Table 4 is examined, it is seen that avoiding coping, negative and active coping strategies have a low and significant positive relationship with adolescents' cyber victimization ($R = 0.25$; $R^2 = 0.06$; $p <0.05$). Avoiding, negative, and active coping strategies together explain 6% of the change in cyber victimization of adolescents. According to the standardized regression coefficients (β), the relative importance of predictor variables on cyber victimization, respectively; avoiding coping (= 0.17), active coping (= 0.17), and negative coping (= 0.15). When the F value in Table 4 is examined, it is determined that the regression model established is statistically significant; in other words, it is significant.

After examining the effects of adolescents 'coping strategies on cyber victimization, "Do adolescents' coping strategies predict cyberbullying situations significantly?" Multiple regression analysis was conducted to find an answer to the research question. Estimates related to the analysis made are given in Table 5.

Table 5. Results of Multiple Regression Analysis Regarding the Effect of Coping Strategies on Cyberbullying Situations of Adolescents

Unstandardized Coefficients			Standardized Coefficients				
Model	b	Std. Error	β	t	p	95% CI	
(Constant)	104,54	8,25	--	12,67	0,000*	88,31	120,77
AC	-0,60	0,38	-0,08	-0,16	0,873	-0,80	0,68
AVC	-1,94	0,47	-0,22	-4,08	0,000*	-2,87	-1,00
NC	-2,36	0,52	-0,23	-4,54	0,000*	-3,38	-1,34
$R = 0,38$	$R^2 = 0,14$						
$F_{3-416} = 23,63$	$p = 0,000*$						

Not: *$p<0,05$; AC = Active coping, AVC = Avoiding coping, NC = Negative coping

When Table 5 is examined, it is seen that avoiding coping and negative coping strategies have a low and significant negative relationship with adolescents' cyberbullying ($R = 0.38$; $R^2 = 0.14$; $p <0.05$). It was found that active coping strategy did not have a statistically significant effect on cyberbullying situations of adolescents ($p > 0.05$). Together, avoidance and negative coping strategies explain 14% of the change in adolescents' cyberbullying situations. According to the standardized regression coefficients (β), the predictor variables are avoiding coping (= -0.23) and negative coping (= -0.23) in order of relative importance on cyberbullying. When the *F* value in Table 5 was examined, it was determined that the regression model established was statistically significant; in other words, it was significant.

Table 6. Results of Multiple Regression Analysis Regarding the Effect of Alexithymia Levels on Cyber Victimization of Adolescents

Unstandardized Coefficients			Standardized Coefficients				
Model	b	Std. Error	β	t	p	95% CI	
(Constant)	105,55	1,94	--	54,39	0,000*	101,74	109,37
DIF	-0,69	0,10	-0,33	-6,86	0,000*	-0,89	-0,49
DDF	-0,58	0,19	-0,16	-3,00	0,003*	-0,95	-0,20
EOT	-0,55	0,10	-0,26	-5,36	0,000*	-0,74	-0,35
$R = 0,63$	$R^2 = 0,40$						
$F_{3-416} = 91,41$	$p = 0,000*$						

Not: *$p<0,05$; DIF = Difficulty Identification feelings, DDF = Difficulty describing feelings, EOT = externally-oriented thinking,

When Table 6 is examined, it is seen that alexithymia levels have a moderate and significant relationship with the cyber victimization of adolescents ($R = 0.63$; $R^2 = 0.40$; $p < 0.05$). Difficulty Identification feelings, Difficulty describing feelings, and externally-oriented thinking together explain 40% of the change in cyber victimization. According to the standardized regression coefficients (β), the relative importance order of the predictor variables on cyber victimization situations, difficulty Identification feelings ($\beta = -0.33$), externally-oriented thinking ($\beta = -0.26$), and = Difficulty describing feelings ($\beta = -0.16$). When the F value in Table 6 is examined, it is determined that the regression model established is statistically significant; in other words, it is significant.

Table 7. Results of Multiple Regression Analysis Regarding the Effect of
Alexithymia Levels on Cyberbullying of Adolescents

	Unstandardized Coefficients		Standardized Coefficients				
Model	**b**	**Std. Error**	**β**	**t**	**p**	**95% CI**	
(Constant)	116,13	1,86	--	62,62	0,000*	112,48	119,74
DIF	-0,82	0,10	-0,35	8,52	0,000*	-1,01	-0,63
DDF	-0,87	0,18	-0,22	4,72	0,000*	-1,23	-0,51
EOT	-0,74	0,10	-0,32	7,62	0,000*	-0,93	-0,55
$R = 0,74$	$R^2 = 0,55$						
$F_{3.416} = 172,51$	$p = 0,000*$						

Not: *$p<0,05$; DIF = Difficulty Identification feelings, DDF = Difficulty describing feelings, EOT = externally-oriented thinking

When Table 7 is examined, it is seen that alexithymia levels have a high and significant relationship with adolescents' cyberbullying status ($R = 0.74$; $R^2 = 0.55$; $p < 0.05$). Difficulty Identification feelings, Difficulty describing feelings, and externally-oriented thinking together explain 55% of the change in cyberbullying. According to the standardized regression coefficients (β), the relative importance order of the predictor variables on cyberbullying situations, difficulty Identification feelings ($\beta = -0,35$), Difficulty describing feelings ($\beta = -0,32$) and externally-oriented thinking ($\beta = -0,22$). When the F value in Table 7 is examined, it is determined that the regression model established is statistically significant; in other words, it is significant.

4. Discussion and Conclusion

This study aimed to examine the cyberbullying and victimization of adolescent students in terms of coping and alexithymia. For this reason, it was aimed to determine whether the cyberbullying and victimization status of high school students studying in Ağrı has a predictive effect according to alexithymia and coping variables. The results obtained from

this study found a statistically significant relationship between cyberbullying situations and coping strategies, and avoidance and negative coping strategies were significant predictors of cyberbullying and cyber victimization situations. In addition, it was found that Active coping strategy predicts cyber victimization situations while not a significant predictor of cyberbullying situations. Research findings show that coping strategies explain 6% of cyber victimization situations. In addition, it was found to explain 14% of cyberbullying cases. It is seen that the research findings are compatible with the literature.

Active coping strategy, which is one of the coping strategies, is a constructive and functional coping strategy and it is a coping strategy where rational evaluations and solutions are produced for the problem encountered, and it is aimed to get rid of the stressful situation with a positive perspective. Avoiding coping strategy is a coping strategy in which individuals ignore the problems they face or aim to accept the problem and get rid of the problem. The negative coping strategy is the coping strategy in which the problem is tried to be dealt with by blaming or harming oneself or someone else with dysfunctional solutions (Işık & Bedel, 2015). It is known that people who experience stress and negative emotions as a result of cyberbullying and victimization experiences frequently use coping strategies to get rid of this negative emotion and situation (Chan & Wong, 2017; Erreygers et al., 2018; Guarini et al., 2019). While trying to cope with the cyberbullying experience, it is known that individuals generally use either problem-focused coping strategies or emotion-focused coping strategies (Chan & Wong, 2017; Carver & Connor-Smith, 2010). When the emotion-focused coping strategy is examined, one of strategies mentioned above, the emotion-focused coping strategies, makes cognitive interventions on the individual's emotional responses while coping with the emotional stress they are exposed to. It is consistent when the literature is examined that it is a predictor for both situations in cyberbullying and victimization and the frequent use of cyberbully and victim for the situation causing stress. When the literature is examined, it is seen that cyberbullies and cyber victims are similarly affected by cyberbullying situations and seek similar solutions (Patching & Hinduja, 2006; Slonje et al., 2012). After cyberbullying situations, victims of bullying committing suicide or harming themselves can be associated with negative coping strategies (Blumenfeld & Cooper, 2010). In addition, victims' hiding their events and not seeking help from anyone can be associated with negative coping. Similarly, cyberbullies' harming themselves or others or being victims of bullying themselves may be associated with avoidant coping strategies (Price & Dalgleish, 2010). When all these are considered together, it can be said that it is consistent with the literature as a result of the bully and victims' use of similar coping strategies in cyberbullying and victimization situations.

It seems that coping and cyberbullying situations are the subject of many studies (Aricak et al., 2008; Völlink et al., 2013; Wong et al., 2014). It can be said that the ineffective use of coping in studies examining the predictive effects of coping strategies can be associated with many psychopathologies (Kommescher et al., 2016; Myers et al., 1993; Spira et al., 2004; Stanton et al., 2002). In addition, it has been observed that individuals effectively

use coping strategies in situations of experiencing or witnessing cyber victimization situations (Metin, 2017). This situation supports the relationship between cyberbullying and victimization situations with coping. It has been stated that 11% of adolescents are cyberbullies, and 29% are exposed to cyberbullying (Patchin & Hinduja, 2006). It is known that cyberbullying and cybervictimization have psychopathological effects on both the bully and the victim, and people who experience stress use coping strategies to cope with stres (Hoff & Mitchell, 2009; Sjursø et al., 2016; Vandebosch & Van Cleemput, 2009; Ybarra, 2004). According to the research conducted by Aricak et al. (2008), cyber victims stated that they have a positive expectation that the bullies will be caught due to cyberbullying, and 40.1% of them know how to deal with cyberbullying. In addition, it has been found that individuals tend to prefer active coping strategies rather than passive coping strategies when they are exposed to cyberbullying. This study gives information about the cause and effect relationship of this relationship.

It has been determined that preventive activities to reduce the frequency of cyber victimization and prevent cyber victimization have been reduced (Hudson, 2016). This result is consistent with the result that coping strategies predict cyber victimization situations. Contrary to our research findings, Guarini et al., (2019) found that effective use of coping strategies did not show any effect in reducing cyberbullying situations. This finding is not consistent with the results of our research. This situation can be explained by the program being conducted and other characteristics of the students. The findings of the research conducted are not consistent with this result because of the differences in the living conditions of the students participating in the present study, their online internet experiences, and the coping strategies they use. In conclusion, while cyberbullying and victimization can be associated with similar stress for cyber bullies and cyber victims (Garaigordobil & Machimbarrena, 2017), it can be said that cyberbullies also apply to coping strategies like cyber victims and try to get rid of this stressful situation (Price & Dalgleish, 2010).

In this study, a statistically significant relationship was found between adolescents' coping strategies with alexithymia. In addition, alexithymia of adolescents explains 55% of the variability in the level of cyberbullying and 40% of cyber victimization. In this study, in which the research question about why one wants to engage in bullying behaviors was investigated, it was concluded that there was a significant relationship between low emotional - cognitive empathy and bullying (Ang & Goh, 2010). It has been determined that cyberbullies lack empathy towards their victims in cyberbullying and victimization experiences. That is, the level of empathy decreases with the increase in cyberbullying situations, and cyberbullies show less empathy to their victims (Horzum et al., 2019; Sezen et al., 2019). Empathy is an effort to understand the feelings and thoughts of the other person correctly by looking at the events from their point of view. Moreover, establish a sensitive communication approach during communication with others (Pala, 2008). When considering the definition of empathy and researches (Turan, 2021), it can be said that cyberbullies cannot understand their victims emotionally and cognitively

correctly. Therefore, it can be said that there is an emotional inadequacy in the relations of cyberbullies and victims. The common coexistence of empathy and alexithymia in some psychopathologies (Ziermans et al., 2019) supports this relationship. In this case, it can be argued that in cases of cyberbullying and victimization, the emotional interaction and communication problems between the bully and the victim may also affect the relationship between cyberbullying and victimization.

The use of collecting research data using only scales is a limitation of the research. In addition, the collection of study data from only one province can be counted as another limitation of the study.

At the end of this study, the following recommendations have been made:

- The universe, sample groups, and age in which the research is conducted can be changed in order to better understand the cyberbullying and victimization situations and to fill the deficiencies in the literature.

- By choosing other variables instead of coping and alexithymia variables as predictors of cyberbullying and victimization, the predictive power of these variables can be examined.

- Families, field experts, and adolescents can be given training and seminars to explain the bullying situations of cyberbullies and the effects of coping strategies on the emergence of cyber victims. Thus, cyberbullying and victimization situations can be reduced.

- Conducting the research with different variables and using different sample groups can contribute to the field.

References

Akca, E. B. and Sayımer, İ. (2017). Siber zorbalık kavramı, türleri ve ilişkili olduğu faktörler: Mevcut araştırmalar üzerinden bir değerlendirme. *AJIT-e: Bilişim Teknolojileri Online Dergisi*, *8*(30),7-19. https://doi.org/10.5824/13091581.201 7.5.001.x

Ang, R. P. and Goh, D. H. (2010). Cyberbullying among adolescents: The role of affective and cognitive empathy, and gender. *Child Psychiatry & Human Development, 41*(4), 387-397. https://doi.org/10.1007/s10578-010-0176-3

Arıcak, O. T., Tanrıkulu, T. and Kınay, H. (2012). Siber mağduriyet ölçeği'nin ilk psikometrik bulguları. *Akdeniz Eğitim Araştırmaları Dergisi*, *11*, 1-6.

Aricak, T., Siyahhan, S., Uzunhasanoglu, A., Saribeyoglu, S., Ciplak, S., Yilmaz, N. and Memmedov, C. (2008). Cyberbullying among Turkish adolescents. *Cyberpsychology & behavior*, *11*(3), 253-261. https://doi.org/10.1089/cpb.2007.0016

Ates, B., Kaya, A., and Tunç, E. (2018). The ınvestigation of predictors of cyberbullying and cyber victimization in adolescents. *International Journal of Progressive Education, 14*(5), 103-118. https://doi.org/10.29329/ijpe.2018.157.9

Bedel, A., Işık, E. and Hamarta, E. (2014). Ergenler için başa çıkma ölçeğinin (ebçö) geçerlik ve güvenirlik çalışması. *Eğitim ve Bilim*, *39*(176),227-235. https://doi.org/10.15390/EB.2014.3501

Besag, V. E. (1989). *Bullies and victims in schools*. United Kingdom: Open University Press.

Blumenfeld, W. J. and Cooper, R. M. (2010). Lgbt and allied youth responses to cyberbullying: Policy implications. *The International Journal of Critical Pedagogy*, *3*(1), 114-133.

Can, S. (2002). "*Aggression questionnaire" adlı ölçeğin Türk popülasyonunda geçerlilik ve güvenilirlik çalışması*. Unpublished Dissertation Thesis, İstanbul: Genelkurmay Başkanlığı, Gülhane Askeri Tıp Akademisi Haydarpaşa Eğitim Hastanesi Ruh Sağlığı ve Hastalıkları Servis Şefliği.

Carver, C. S. and Connor-Smith, J. (2010). Personality and coping. *Annual review of psychology*, *61*, 679-704. https://doi.org/10.1146/annurev.psych.093008.100352

Ceyhan, A. A. (2011). İnternet kullanma temel nedenlerine göre üniversite öğrencilerinin problemli internet kullanımı ve algıladıkları iletişim beceri düzeyleri. *Kuram ve Uygulamada Eğitim Bilimleri*, *11*(1), 59-77.

Chan, H. C. and Wong, D. S. (2019). Traditional school bullying and cyberbullying perpetration: Examining the psychosocial characteristics of Hong Kong male and female adolescents. *Youth & Society*, *51*(1), 3-29. https://doi.org/10.1177/0044118X16658053

Chan, H. C. O. and Wong, D. S. (2017). Coping with cyberbullying victimization: An exploratory study of Chinese adolescents in Hong Kong. *International Journal Of Law, Crime and Justice*, *50*, 71-82. https://doi.org/10.1016/j.ijlcj.2017.04.003

Çelebi, B. M. and Polat, A. (2019). Çocukluk çağı travmatik yaşantıların, yetişkin bağlanma stillerinin ve psikolojik iyi oluşun evlilik doyumu üzerindeki etkisi. *Kocaeli Üniversitesi Sağlık Bilimleri Dergisi*, *5*(1), 29-34.

Çetin, B., Yaman, E. and Peker, A. (2011). Cyber victim and bullying scale: A study of validity and reliability. *Computers & Education*, *57*(4), 2261-2271. https://doi.org/10.1016/j.compedu.2011.06.014

Dereboy, İ. F. (1990). *Aleksitimi öz bildirim ölçeklerinin psikometrik özellikleri üzerine bir çalışma*. Yayınlanmamış Uzmanlık Tezi, Ankara: Ankara Hacettepe Üniversitesi.

Duyan, M. and Yildiz, S. M. (2019). The effect of mobbıng behavior on athlete burnout: A study on university students participating in the universities futsal league. *European Journal of Education Studies*, *5*(10), 177-185.

Erreygers, S., Vandebosch, H., Vranjes, I., Baillien, E. and De Witte, H. (2018). Positive or negative spirals of online behavior? Exploring reciprocal associations between

being the actor and the recipient of prosocial and antisocial behavior online. *New Media & Society*, *20*(9), 3437-3456. https://doi.org/10.1177/1461444817749518

Eryılmaz, A. (2009). *The mediating role of coping with strategies the between adolescent personality traits and subjective well-being*. Unpublished Doctoral Dissertat, Ankara: The Institute of Education Sciences.

Folkman, S. and Lazarus, R. S. (1984). *Stress, appraisal, and coping* (p. 460). New York: Springer Publishing Company.

Folkman, S. and Lazarus, R. S. (1988). Coping as a mediator of emotion. *Journal of personality and social psychology*, *54*(3), 466. https://doi.org/10.1037/0022-3514.54.3.466

Freyberger, H. (1977). Supportive psychotherapeutic techniques in primary and secondary alexithymia. *Psychotherapy and psychosomatics*, *28*(1-4), 337-342. https://doi.org/10.1159/000287080

Gaffney, H., Farrington, D. P., Espelage, D. L. and Ttofi, M. M. (2019). Are cyberbullying intervention and prevention programs effective? A systematic and meta-analytical review. *Aggression and violent behavior*, *45*, 134-153. https://doi.org/10.1016/j.avb.2018.07.002

Garaigordobil, M. & Machimbarrena, J. M. (2017). Stress, competence, and parental educational styles in victims and aggressors of bullying and cyberbullying. *Psicothema*, *29*(3), 335-340.

Graziano, R. C., Bruce, S. E., Paul, R. H., Korgaonkar, M. S. and Williams, L. M. (2019). The effects of bullying in depression on white matter integrity. *Behavioural brain research*, *363*, 149-154. https://doi.org/10.1016/j.bbr.2019.01.054

Guarini, A., Menin, D., Menabò, L. and Brighi, A. (2019). RPC teacher-based program for improving coping strategies to deal with cyberbullying. *International journal of environmental research and public health*, *16*(6), 948. https://doi.org/10.3390/ijerph16060948

Güleç, H., Köse, S., Güleç, M. Y., Çitak, S., Evren, C., Borckardt, J. and Sayar, K. (2009). Reliability and factorial validity of the Turkish version of the 20-item Toronto alexithymia scale (TAS-20). *Klinik Psikofarmakoloji Bulteni*, *19*(3), 214.

Hoff, D. L. & Mitchell, S. N. (2009). Cyberbullying: Causes, effects, and remedies. *Journal of Educational Administration, 47*(5), 652-665. https://doi.org/10.1108/09578230910981107

Horzum, M. B., Ayas, T., Randler, C. and Düşünceli, B. (2021). The effects of empathy and circadian preference on cyberbullying of adolescents in Turkey. *Biological Rhythm Research, 52*(5), 781-794. https://doi.org/10.1080/09291016.2019.1603839

Hudson Jr, D. L. (2016). Is cyberbullying free speech. *ABAJ*, *102*, 18.

Hughes, R., Kinder, A. and Cooper, C. L. (2019). Living with depression. In *the wellbeing workout* (pp. 139-143). Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-92552-3_24

Işık, E. and Bedel, A. (2015). Ergenlerde başa çıkma stratejileri ile öznel iyi oluş arasındaki ilişkiler. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (34), 53-60.

Karasar, N. (2014). *Bilimsel araştırma yöntemi*. Ankara: Nobel Yayınevi

Kırşehirli, M. (2011). *Zihinsel engelli çocuklara öz bakım becerilerinin şarkı yoluyla öğretilmesi*. Yayımlanmış Yüksek Lisans Tezi, Bolu: Abant İzzet Baysal Üniversitesi.

Koçak, R. (2002). Aleksitimi: Kuramsal çerçeve tedavi yaklaşımları ve ilgili araştırmalar. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, *35*(1), 183-212. https://doi.org/10.1501/Egifak_0000000056

Leemis, R. W., Espelage, D. L., Basile, K. C., Mercer Kollar, L. M. and Davis, J. P. (2019). Traditional and cyber bullying and sexual harassment: A longitudinal assessment of risk and protective factors. *Aggressive behavior*, *45*(2), 181-192. https://doi.org/10.1002/ab.21808

Li, M., Fu, R., Xue, H. and Wang, Y. (2019). Intergenerational association of maternal obesity and child peer victimization in the United States. *Journal of health and social behavior*, *60*(1), 69-83. https://doi.org/10.1177/0022146518824566

M. Kommescher, M. Wagner, V. Putzfeld, J. Berning, B. Janssen, P. Decker, R. Bott lender, H.J. Möller, W. Gaebel, W. Maier, J. Klosterkötter and A. Bechdolf (2016). Coping as a predictor of treatment outcome in people at clinical high risk of psychosis. *Early intervention in psychiatry, 10*(1), 17-27. https://doi.org/10.1111/eip.12130

Metin, K. E. (2017). Ortaokul öğretmenlerinin siber zorbalık yaşama düzeyleri ve siber zorbalıkla başa çıkma stratejileri. *Eğitim ve Toplum Araştırmaları Dergisi*, *4*(2), 33-49.

Mukherjee, S., Sinha, D., De, A., Misra, R., Pal, A. and Mondal, T. K. (2019). Cyberbullying among late adolescent: A cross-sectional study in two higher secondary schools of Kolkata, West Bengal. *Indian journal of public health*, *63*(1), 86. https://doi.org/10.4103/ijph.IJPH_92_18

Myers, M. G., Brown, S. A. and Mott, M. A. (1993). Coping as a predictor of adolescent substance abuse treatment outcome. *Journal of Substance Abuse*, *5*(1), 15-29. https://doi.org/10.1016/0899-3289(93)90120-Z

Olweus, D. (1993). Acoso escolar,"bullying", en las escuelas: hechos e intervenciones. *Centro de investigación para la Promoción de la Salud, Universidad de Bergen, Noruega*, *2*, 1-23.

Olweus, D., Catalano, R. and Slee, P. (1999). *The nature of school bullying: A cross-national perspective*. Psychology Press.

Pala, A. (2008). Öğretmen adaylarının empati kurma düzeyleri üzerine bir araştırma. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 23*(23), 13-23.

Patchin, J. W. and Hinduja, S. (2006). Bullies move beyond the school yard: A preliminary look at cyber bullying. *Youth Violence and Juvenile Justice, 4*(2), 148-169. https://doi.org/10.1177/1541204006286288

Pearlin, L. I. and Schooler, C. (1978). The structure of coping. *Journal of health and social behavior*, 2-21. https://doi.org/10.2307/2136319

Pereira, F., Spitzberg, B. H. and Matos, M. (2016). Cyber-harassment victimization in Portugal: Prevalence, fear and help-seeking among adolescents. *Computers in Human Behavior*, *62*, 136-146. https://doi.org/10.1016/j.chb.2016.03.039

Price, M. and Dalgleish, J. (2010). Cyberbullying: Experiences, impacts and coping strategies as described by Australian young people. *Youth Studies Australia*, *29*(2), 51-59.

Roland, E. and Munthe, E. (2017). *Bullying (1989): An international perspective*. Routledge.

Sayar, K., Bilen, A. and Arıkan, M. (2001). Kronik ağrı hastalarında öfke, benlik saygısı ve aleksitimi. *Türkiye Klinikleri Psikiyatri Dergisi, 2*(1), 36-42.

Sjursø, I. R., Fandrem, H. and Roland, E. (2016). Emotional problems in traditional and cyber victimization. *Journal of School Violence*, *15*(1), 114-131. https://doi.org/10.1080/15388220.2014.996718

Slonje, R., Smith, P. K. and Frisén, A. (2012). Processes of cyberbullying, and feelings of remorse by bullies: A pilot study. *European Journal of Developmental Psychology*, *9*(2), 244-259. https://doi.org/10.1080/17405629.2011.643670

Smith, P. K. (2019). *Research on cyberbullying: strengths and limitations*. H. Vandebosch, L. Green (Eds.), In Narratives in research and interventions on cyberbullying among young people, (pp. 9–27). Springer.https://doi.org/10.1007/978-3-030-04960-7_2

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S. and Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. *Journal of child psychology and psychiatry*, *49*(4), 376-385. https://doi.org/10.1111/j.1469-7610.2007.01846.x

Sorrentino, A., Baldry, A. C., Farrington, D. P. and Blaya, C. (2019). Epidemiology of cyberbullying across Europe: Differences between countries and genders. *Educational Sciences: Theory & Practice*, *19*(2), 74-91.

Spira, A. P., Zvolensky, M. J., Eifert, G. H. and Feldner, M. T. (2004). Avoidance-oriented coping as a predictor of panic-related distress: A test using biological

challenge. *Journal of Anxiety Disorders*, *18*(3), 309-323. https://doi.org/10.1016/ S0887-6185(02)00249-9

Spirito, A., Stark, L. J. and Williams, C. (1988). Development of a brief coping checklist for use with pediatric populations. *Journal of pediatric psychology*, *13*(4), 555-574. https://doi.org/10.1093/jpepsy/13.4.555

Stanton, A. L., Danoff-burg, S. and Huggins, M. E. (2002). The first year after breast cancer diagnosis: hope and coping strategies as predictors of adjustment. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, *11*(2), 93-102. https://doi.org/10.1002/pon.574

Şata, M. (2020). Nicel araştırma yaklaşımları. Oğuz, E.(Ed.). *Eğitimde araştırma yöntemleri içinde* (s:77-97). Ankara: Eğiten Kitap.

Taylor, G. J., Parker, J. D. & Bagby, R. M. (1997). Relationships between alexithymia and related constructs. *The (non) expression of emotions in health and disease*, 103-114.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in human behavior*, *26*(3), 277-287. https://doi.org/10.1016/j.chb.2009.11.014

Turan, M. E. (2021). Empathy and video game addiction in adolescents: serial mediation by psychological resilience and life satisfaction. *International Journal of Progressive Education*, *17*(4), 282-296. https://doi.org/10.29329/ijpe.2021.366.17

Tümlü, G. Ü. and Recepoğlu, E. (2013). Üniversite akademik personelinin psikolojik dayanıklılık ve yaşam doyumu arasındaki ilişki. *Journal of Higher Education & Science, 3*(3), 205-213. https://doi.org/10.17719/jisr.2019.3123

Uzun, K. and Karataş, Z. (2019). Okul tükenmişliğinin yordayıcısı olarak akran zorbalığı ve siber mağduriyet. *Journal of International Social Research*, *12*(62).

Ünlü, S., Tuna, Y., Özbaş Anbarlı, Z. and Tosunay, D. (2019). Ergenlerde empati ve siber zorbalık-siber mağduriyet ilişkisi: Eskişehir'de özel okul öğrencilerine yönelik bir araştırma. *Karadeniz Teknik Üniversitesi İletişim Araştırmaları Dergisi, 9*(1), 38-58.

Vandebosch, H. and Van Cleemput, K. (2009). Cyberbullying among youngsters: Profiles of bullies and victims. *New media & society*, *11*(8), 1349-1371. https://doi.org/1 0.1177/1461444809341263

Völlink, T., Bolman, C. A., Dehue, F. and Jacobs, N. C. (2013). Coping with cyberbullying: Differences between victims, bully-victims and children not involved in bullying. *Journal of community & applied social psychology*, *23*(1), 7-24. https://doi.org/10.1002/casp.2142

Wang, J., Iannotti, R. J., Luk, J. W. and Nansel, T. R. (2010). Co-occurrence of victimization from five subtypes of bullying: Physical, verbal, social exclusion, spreading

rumors, and cyber. *Journal of pediatric psychology*, *35*(10), 1103-1112. https://doi.org/10.1093/jpepsy/jsq048

Way, I., Yelsma, P., Van Meter, A. M. and Black-Pond, C. (2007). Understanding alexithymia and language skills in children. *Implications for assessment and intervention, 38*(2), 128-139. https://doi.org/10.1044/0161-1461(2007/013)

Wong, D. S., Chan, H. C. O. and Cheng, C. H. (2014). Cyberbullying perpetration and victimization among adolescents in Hong Kong. *Children and youth services review*, *36*, 133-140. https://doi.org/10.1016/j.childyouth.2013.11.006

Ybarra, M. L. (2004). Linkages between depressive symptomatology and internet harassment among young regular internet users. *CyberPsychology & Behavior*, *7*(2), 247-257. https://doi.org/10.1089/109493104323024500

Yersel, B. Ö. and Durualp, E. (2019). İşitme engeli ve dil konuşma bozukluğu olan çocukların annelerinin sosyal destek algıları. *Bilim Eğitim Sanat ve Teknoloji Dergisi*, *3*(1), 1-12. Retrieved from https://dergipark.org.tr/en/pub/bestdergi/issue/40454/426359

Zackheim, L. (2007). Alexithymia: The expanding realm of research. *Journal of Psychosomatic Research, 63*(4), 345–347. https://doi.org/10.1016/j.jpsychores.2007.08.011

Ziermans, T., de Bruijn, Y., Dijkhuis, R., Staal, W. and Swaab, H. (2019). Impairments in cognitive empathy and alexithymia occur independently of executive functioning in college students with autism. *Autism, 23*(6), 1519-1530. https://doi.org/10.1177/1362361318817716