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Resilience in Adolescents Following Experience of Sexual Abuse: Self-Esteem as a Mediator

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Foreword

Submitted in partial fulfillment of the requirements of the BSc Psychology degree, Reykjavik University, this thesis is presented in the style of an article for submission to a peer-reviewed journal. This thesis was completed in the Spring of 2021 and may therefore have been significantly impacted by the COVID-19 pandemic. The thesis and its findings should be viewed in the light of that.

Abstract

While sexual abuse has adverse consequences for victims, some, however, show a significant ability to maintain normal functioning in life or resilience. Studies on sexual abuse survivors indicate that different personal and environmental factors mediate the effect of sexual abuse on resilience. The aim of this study was to examine how sexual abuse affects resilience in adolescents and the mediating role of self-esteem. The study was conducted using a random sample of 2,129 adolescents studying at junior colleges in Iceland in 2016. The findings indicated that sexual abuse victims had significantly less resilience than non-victims. Self-esteem was positively correlated with resilience. Factorial analysis of covariance demonstrated that the relationship between self-esteem and resilience in sexual abuse victims interacts with gender. Overall, boys scored higher on the resilience scale compared to girls, both among sexual abuse victims and non-victims. Mediation analysis suggested that self-esteem fully mediates the impact of sexual abuse on resilience in boys, and that self-esteem partially mediates the impact of sexual abuse on resilience in girls. The results of the study demonstrated that sexual abuse negatively affects resilience and that the relationship between self-esteem and resilience interacts with gender. Furthermore, self-esteem is an essential factor for developing resilience following experience of sexual abuse.

Keywords: resilience, sexual abuse, self-esteem, adolescents

Útdráttur

Kynferðisofbeldi hefur alvarleg áhrif á fórnarlömb en þó virðast einhver fórnarlömb sýna ótrúlega hæfni til að viðhalda eðlilegri virkni, eða seiglu. Rannsóknir á brotaþolum kynferðisofbeldis gefa til kynna að margvíslegir einstaklings- og umhverfisþættir hafa áhrif á það hvernig seigla þróast hjá þeim sem hafa orðið fyrir kynferðisofbeldi. Markmið þessarar rannsóknar var að kanna áhrif kynferðisofbeldis á seiglu og hvernig sjálfsálit hefur áhrif á sambandið þar á milli. Rannsóknin notaðist við slembiúrtak sem samanstóð af 2.129 ungmennum sem stunduðu nám við framhaldsskóla á Íslandi árið 2016. Niðurstöður gáfu til kynna að brotaþolar kynferðisofbeldis höfðu minni seiglu en þeir sem ekki höfðu orðið fyrir kynferðisofbeldi. Sjálfsálit hafði jákvæða fylgni við seiglu. Marghliða dreifigreining sýndi fram á að kyn hefur áhrif á sambandið milli sjálfsálits og seiglu meðal brotaþola kynferðisofbeldis. Drengir mældust almennt hærri í seiglu samanborið við stúlkur, bæði meðal fórnarlamba kynferðisofbeldis og þeirra sem ekki höfðu orðið fyrir kynferðisofbeldi. Greining á miðluaráhrifum leiddi í ljós að sjálfsálit miðlaði áhrifum kynferðisofbeldis á seiglu að fullu hjá drengjum en að hluta til meðal stúlkna. Niðurstöður sýndu þar með fram á að kynferðisofbeldi hefur almennt neikvæð áhrif á seiglu og að kyn hefur áhrif á sambandið milli sjálfsálits og seiglu í kjölfar kynferðisofbeldis. Enn fremur sýndu niðurstöður fram á mikilvægi sjálfsálits fyrir þróun seiglu í kjölfar kynferðisofbeldis.

Resilience in Adolescents Following Experience of Sexual Abuse: Self-Esteem as a

Mediator

Adolescence is an important period in one's life that brings many challenges, such as entering a new school, development of old and new friendships, romantic relationships, and even concerns regarding long-term goals (Shaffer & Kipp, 2012). Individuals experience adolescence differently and each have their own way of coping with its challenges. Some are more resilient than others and cope better when facing hardships and adversity (Herrman et al., 2011).

Resilience

The way in which a person adapts positively following exposure to serious adversity is referred to as resilience (Herrman et al., 2011). Although scientific studies on resilience are rather new in trauma research, the pursuit of methods for promoting resilience in general go way back to ancient times (Friedberg & Malefakis, 2018). Over the past 50 years, research on resilience has bloomed, however it is an evolving concept in terms of its definition (Fleming & Ledogar, 2008). Some define resilience as a personal trait, meanwhile others define resilience as a dynamic process that can be influenced by external factors, such as the social support one receives. Social support is correlated with resilience (Luthar & Cicchetti, 2000; Luthar et al., 2000; Southwick & Charney, 2018). Social support can come from peers who positively affect the individual, supportive teachers, and family members (Luthar & Cicchetti, 2000; Luthar et al., 2000). Community factors also contribute to resilience, including good schools, community services, culture, sports, spirituality and religion, arts, and absence of violence (Luthar & Cicchetti, 2000; Luthar et al., 2000). Hence, resilience can be considered as an individual trait that adapts depending on the social support from the environment, although it can also be influenced by biological factors (Cicchetti & Curtis, 2015; Herrman et al., 2011). Biological factors refer to differences in brain structure, function, neurobiological

systems, and processes that can impact one's ability to regulate negative emotions, which influences resilience to adversities (Cicchetti & Curtis, 2015; Herrman et al., 2011).

Leading theorists in the field of psychology define resilience as positive adaptation in individuals who have experienced significant adversity or the capacity to regain or maintain mental health, despite facing adversity (Herrman et al., 2011; Yule et al., 2019). This definition was applied to the current study, as it focused on the individual rather than external factors influencing resilience.

Personal factors that influence resilience are personality traits such as openness, optimism, extraversion, and agreeableness. Self-control, self-efficacy, and self-esteem also contribute to resilience (Herrman et al., 2011). Furthermore, intellectual functioning, positive self-concept, positive emotions, social attachment, cognitive flexibility, regulation of emotions, active coping, hope, hardiness, adaptability, resourcefulness, and spirituality are linked with resilience (Afifi & MacMillan, 2011; Herrman et al., 2011; Joseph & Linley, 2006). Studies have observed that individuals with higher resilience are less likely to experience emotional and behavioral difficulties (Goldstein et al., 2013). Resilience has been found to be negatively associated with depression despite adverse experiences in childhood, as well as it contributes to improved psychological outcomes following adversity (Collishaw, 2007).

Sexual Abuse and Resilience

The American Psychological Association (n.d., *Sexual Abuse*) defines sexual abuse as "unwanted sexual activity, with perpetrators using force, making threats or taking advantage of victims not able to give consent". However, the conceptual definition of child sexual abuse remains a bit unclear due to enduring challenges that lie in identifying, measuring, and responding to sexual abuse. The consideration regarding a strong theoretical basis in the design, implementation, and regulation of sexual abuse measures are inadequate (Mathews,

2017). Sexual abuse is widespread in most societies, however, there is inconsistency in how sexual abuse is identified and interpreted among different cultures (Mathews, 2017; Stoltenborgh et al., 2011). In some cultural contexts, sexual abuse is unacknowledged due to a lack of knowledge, ignorance, denial, or even intentional wrongdoing (Lanning & Dietz, 2014; Wurtele, 2012).

A meta-analysis of 217 international reports published between 1980 and 2008 found the estimated prevalence rate of sexual abuse to be 18% among females and 7.6% among males, before the age of 18 (Stoltenborgh et al., 2011). Childhood sexual abuse has adverse consequences on the psychological adjustment, functioning, well-being, and the overall health of victims (Yule et al., 2019). Consequences include a wide range of mental disorders, such as posttraumatic stress disorder (PTSD), anxiety, depression, and substance abuse (Chen et al., 2010). While childhood sexual abuse seems to increase the risk of these disorders, studies have found that some victims of sexual abuse maintain normal functioning and show a significant ability to bounce back following the traumatic experience of sexual abuse (Domhardt et al., 2015; Friedberg & Malefakis, 2018).

Domhardt et al. (2015) reviewed 37 studies in which various methods, measures, samples, and conceptualizations of resilience were used. Findings demonstrated a large variability of childhood sexual abuse victims who exhibited adaptive functioning. Ten studies were found describing resilience rates in child sexual abuse survivor samples. Some samples involved children and adolescents, in which 10% to 53% exhibited resilience. In samples among adults, resilience ranged from 15% to 47%. These findings indicate that an array of personal and environmental factors either mediate or moderate the effect of sexual abuse.

Edmond et al. (2006) identified protective factors associated with resilience following sexual abuse and found that educational engagement, school performance, and positive emotions towards school seem to contribute to resilience both among children and adults.

Emotional and interpersonal competence were also found to serve as protective functions and prevent detrimental consequences of sexual abuse. The personal factors of hope, optimism, and control beliefs were identified as protective factors, which reflects the importance of finding ways to increase hope and strengthen positive beliefs in the future of sexually abused individuals. An essential protective factor was found to be self-esteem. Furthermore, it can be considered as an indicator of resilience. Altogether, these results demonstrate the importance of support from an array of sources, which serve as buffers against harmful effects of sexual abuse (Edmond et al., 2006). In light of this, it is essential to assess the mediation effect of self-esteem on resilience following exposure to sexual abuse.

Self-Esteem

Self-esteem is "the evaluative dimension of self-regard, combining a cognitive and an affective aspect" (Lopez, 2011, pp. 881). Individuals obtain knowledge of themselves, arranged into schemas that are acquired from experience among with real or imagined judgments of others which they respond emotionally to (Lopez, 2011). Low self-esteem is related to behavioral and emotional problems (Arslan, 2016). Individuals with more self-esteem have a more positive view of their competencies and characteristics, positively affecting their well-being (Shaffer & Kipp, 2012). Positive association has been found between self-esteem and resilience, and research has shown that self-esteem indicates the potential for developing self-efficacy, a construct closely related to resilience (Benetti & Kambouropoulos, 2006; Caprara et al., 2013). Stein et al. (2002) found that self-esteem mediates the relationship between experience of abuse and depression. Self-esteem has been identified as a protective factor in psychological symptoms in physical abuse victims (Arslan, 2016). A study of 153 women who had been sexually abused found that more self-esteem significantly predicted increased subjective health and that self-esteem served as a protective factor against interpersonal problems (Jonzon & Lindblad, 2006).

Current Study

Previous studies have demonstrated the role of multiple factors in resilience following sexual abuse. The aim of this study was to explore the association between resilience and sexual abuse, and the mediator role of self-esteem. Currently, the field of psychology puts a considerable focus on understanding stress and its consequences, but studying factors that positively influence individuals, such as resilience, is equally important (Friedberg & Malefakis, 2018). Based on the previously mentioned studies, the subsequent hypotheses are as follows: (1) Sexual abuse victims have less resilience than non-victims. (2) There is a positive correlation between self-esteem and resilience in adolescents. (3) The relationship between self-esteem and resilience in sexual abuse victims interacts with gender. (4) Self-esteem mediates the impact of sexual abuse on resilience in boys and girls.

Method

Participants

Participants in the study were randomly selected from the 2016 Youth in Iceland cross-sectional population-based survey of adolescents. The survey was administered to all available junior college students in Iceland by the Icelandic Centre for Social Research and Analysis (ICSRA). A total of 10,717 adolescents who were at school the day the survey was implemented participated in the study, and the response rate was 71%. The current study employed a randomly selected sample consisting of 2,129 individuals of age 16 to 20 years. Among the participants, 49.7% were male and 50.3% were female. Participants were not required to take part in the study and did not receive any reward for their participation.

Measures

Resilience

To assess resilience, the Connor-Davidson Resilience Scale (CD-RISC-10) was used. CD-RISC-10 has been tested in clinical samples and the population and has shown good test-

retest reliability and internal consistency (Connor & Davidson, 2003; Scali et al., 2012). The scale includes ten items, rated on a five-point scale (*1 = not true at all; 2 = rarely true; 3 = sometimes true; 4 = often true; 5 = true nearly all the time*). The items were computed into one variable that represented overall resilience. Scoring had the value of 1 to 5, with higher scores reflecting more resilience. The items were as follows: "I am able to adapt when changes occur", "I can deal with whatever comes my way", "I try to see the humorous side of things when I am faced with problems", "Having to cope with stress can make me stronger", "I tend to bounce back after illness, injury or other hardships", "I believe I can achieve my goals, even if there are obstacles", "Under pressure, I stay focused and think clearly", "I am not easily discouraged by failure", and "I think of myself as a strong person when dealing with life's challenges and difficulties". Internal reliability for resilience was good ($\alpha = .93$).

Sexual Abuse

Sexual abuse was measured using a question regarding occurrence and severity of sexual abuse in different age ranges. The questions have been observed as valid assessment in previous studies (Asgeirsdottir et al., 2011; Sigfusdottir et al., 2008). The introduction to the questions was as follows: "Sometimes people are persuaded, pressed, or forced to participate in sexual activities they cannot protect themselves from. The following questions are about such situations. Have you ever been involved with the following situations without your approval (if so, how old were you when it happened)?" This followed with five different claims regarding sexual abuse scenarios: "Someone exposed themselves in front of you in an inappropriate way?", "Someone groped you somewhere on the body, apart from the genitals, in an inappropriate way?", "Someone groped your genitals?", "Someone convinced you or forced you to touch his/her genitals", and "Someone convinced you or forced you to have sex or intercourse with them?". Each question could be responded to with five different choices depending on the age of the participant at the time of the abuse (*never; 12 years or younger;*

13-15 years; 16-17 years; 18 years or older). To differentiate those who had experienced

sexual abuse from those who had not experienced sexual abuse, sexual abuse was recoded

into a dichotomous variable in which those who reported any type of sexual abuse once or

more in any of the age ranges were combined. Hence the variable was coded as 0 = "did not

report experience of sexual abuse", and 1 = "did report experience of sexual abuse", as done

in Sigfusdottir et al. (2008).

Self-Esteem

To assess self-esteem, the Rosenberg Self-Esteem Scale (RSE) was used. The

Rosenberg scale has demonstrated excellent internal consistency and high internal validity

(Hagborg, 1993). The Rosenberg scale captures participants' perceptions of their own self-

worth on a ten-item scale, consisting of five positively worded items and five negatively

worded items. The answer options were on a four-point scale (*1 = strongly agree; 2 = agree;*

3 = disagree; 4 = strongly disagree). The items were as follows: "I feel that I am a person of

worth", "I feel that I have a number of good qualities", "All in all, I am inclined to think that

I am a failure", "I am able to do things as well as most other people", "I feel I do not have

much to be proud of", "I take a positive attitude toward myself", "On the whole, I am satisfied

with myself", "I wish I could have more respect for myself", "I certainly feel useless at

times", and "At times I think I am no good at all". Five items were recoded for all items of the

scale to correspond and have higher values accounting for more high self-esteem. Items were

computed into one variable that represented overall self-esteem. Scoring had the value of 1 to

4, where higher scores indicated higher self-esteem. The internal reliability for self-esteem

was good (α = .91).

Gender

Gender was measured using the following question: "Are you a boy or a girl?" The

question was binominal: 0 = "*boy*" and 1 = "*girl*".

Procedure

Data were collected using anonymous questionnaires. The questionnaires were dispatched to every junior college in Iceland on the same day in the spring of 2016. Teachers and personnel in each school supervised students using procedures approved by the National Bioethics Committee and the Icelandic Data Protection Agency. Students were instructed to respond to the questions conscientiously, and that they could discontinue participation at any time. Students were instructed not to write their names nor any other identifying information on the questionnaires to maintain anonymity. The questionnaires came with an unmarked envelope for each student to seal after completing the survey. Teachers and other school personnel collected the envelopes and dispatched the data for processing (Pálsdóttir et al., 2016). Permission was given from ICSRA for employment of the data in the present study and the study was permitted by the National Bioethics Committee (VSN-21-053).

Research Design and Data Analysis

The current study was quantitative and cross-sectional. The dependent variable was resilience, and the independent variables were sexual abuse and gender. The mediator variable was self-esteem. The statistical program IBM SPSS Statistics (27th edition) was used for data processing and analyzing. A chi-square test was used to test the prevalence of sexual abuse by gender. Descriptive analysis, means, standard deviations, and correlation tests were generated for resilience and self-esteem. Independent samples t-tests were performed to determine whether there was a significant mean difference in resilience and self-esteem by gender and experience of sexual abuse. Factorial analysis of covariance (two-way Ancova) was conducted to determine main effects of sexual abuse on resilience while controlling for self-esteem, as well as interaction effects for gender and self-esteem. The assumption regarding homogeneity of variance was met for both the independent samples t-tests and the two-way Ancova, according to the Levene's test of equality of error variances. To analyze the

mediating role of self-esteem between sexual abuse and resilience, two mediation models were generated using the Hayes Process macro tool (Hayes, 2017). In statistical research, the term mediation is used to describe a causal chain where it is assumed that the effect of an independent variable on a dependent variable is led by (or transmitted) by a third, mediator variable (Pardo & Román, 2013).

Results

Out of 2,129 respondents, 469 (22%) answered yes to one or more of the five questions on sexual abuse, shown in table 1. In regards to the specific items in the composite measure of sexual abuse, 2.5% of the boys and 11.7% of the girls reported indecent exposure and/or someone touching their bodies, excluding genitals, in an indecent way, 6.1% of boys and 10.6% of the girls reported someone touching their genitals and/or being forced to touch someone else's genitals, and 9.4% of boys and 12.9% of girls reported being persuaded, pressured or forced into having sexual intercourse. A significant difference was found between the genders with girls having an overall greater prevalence of sexual abuse (32.6%) than boys (11.2%), $\chi^2 (1, N = 2,129) = 141.31; p < .001$.

Table 1

Number and Proportional Distribution of the Prevalence of Sexual Abuse Among Boys and Girls

	Frequency			Percent		
	Boys	Girls	Total	Boys	Girls	Total
Suffered sexual abuse	119	349	468	11.2%	32.6%	22.0%
Not suffered sexual abuse	939	722	1661	88.8%	67.4%	78.1%
Total	1058	1071	2129	100%	100%	100%

Table 2 presents the descriptive statistics; range, means, and standard deviations, of resilience and self-esteem by gender and sexual abuse. Independent samples t-tests demonstrated significant mean differences by gender in resilience $t(1930) = 8.65$; $p < .001$, and self-esteem $t(1969) = 10.64$; $p < .001$, with boys reporting higher resilience and higher self-esteem than girls. As was hypothesized, independent samples t-tests demonstrated significant mean differences in resilience by experience of sexual abuse, $t(1949) = 4.57$; $p < .001$, as well as in self-esteem, $t(661) = 10.28$; $p < .001$, with sexual abuse victims reporting lower resilience and self-esteem than non-victims.

Table 2

Descriptive Statistics for Resilience and Self-Esteem.

|	Variable	*N*	*M*	*SD*	Min	Max
1	Resilience	1,951	3.65	.82	1	5
	Boys	929	3.81**	.86		
	Girls	1,003	3.49	.78		
	Sexual abuse	453	3.49**	.81		
	No sexual abuse	1,498	3.7	.82		
2	Self-Esteem	2,005	3.12	.67	1	4
	Boys	971	3.27**	.61		
	Girls	1,015	2.98	.69		
	Sexual abuse	458	2.8**	.62		
	No sexual abuse	1,547	3.2	.73		

Note. ** Mean difference is significant at the .001 level; *N* = Number of participants; *M* = Mean; *SD* = Standard Deviation.

Consistent with the second hypothesis, the intercorrelation between self-esteem and resilience indicated that self-esteem is positively related to resilience; the higher the self-esteem, the higher the resilience ($r = .56$).

In light of the variance in sexual abuse between boys and girls as well as the significant mean difference in resilience and self-esteem, a factorial analysis of covariance (two-way Ancova) was conducted to test for an interaction effect between gender and self-esteem on resilience, as well as main effects of sexual abuse and gender, with self-esteem as a covariate. Figure 1 displays mean scores in resilience by experience of sexual abuse and gender, while controlling for self-esteem.

Figure 1

Comparison of Resilience Scores for Male and Female Sexual Abuse Victims and Non-Victims when Controlling for Self-Esteem
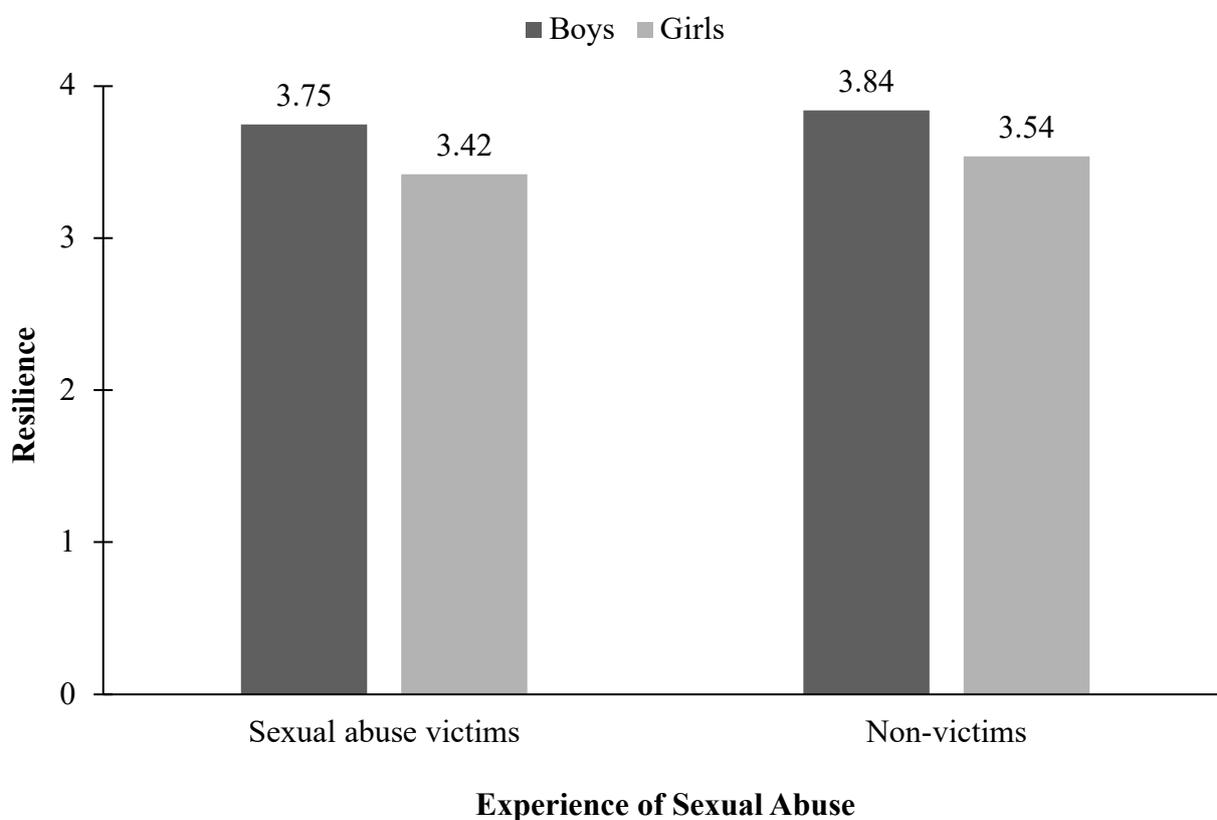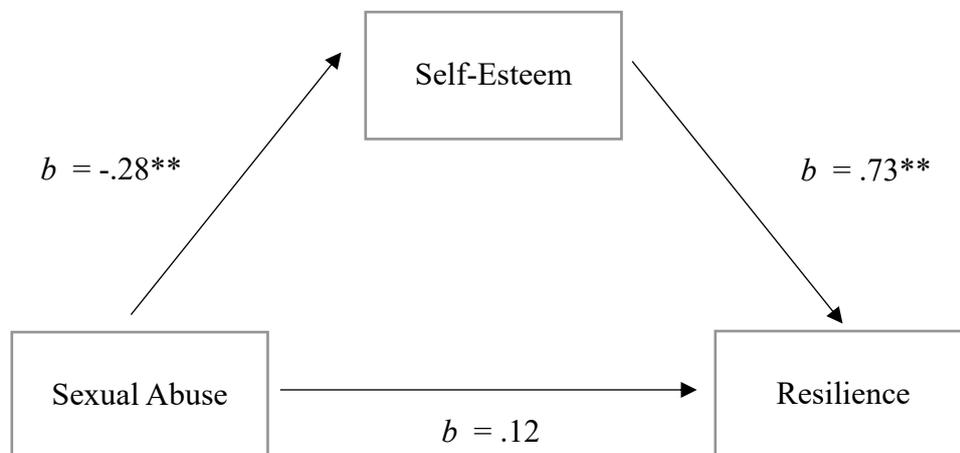
A significant main effect was found for sexual abuse, $F(1, 1865) = 7.03$; $p < .01$, on resilience; those who had experienced sexual abuse exhibited lower resilience ($M = 3.51$) than non-victims ($M = 3.70$). Main effects for gender were also significant, $F(1,1865) = 0.71$; $p = .008$; boys exhibited higher resilience ($M = 3.75$) than girls ($M = 3.42$). Consistent with the third hypothesis that stated that the relationship between self-esteem and resilience in sexual abuse victims interacts with gender, the interaction effect between gender and self-esteem was significant, $F(2, 1865) = 376.84$; $p < .001$, which raises concerns about the assumption of homogeneity of the regression slopes and supports doing separate mediation analysis for boys and girls.

To test the fourth hypothesis which stated that self-esteem mediates the impact of sexual abuse on resilience in boys and girls, the Hayes Process macro for SPSS (Hayes, 2017) was used. Since a significant interaction effect between gender and self-esteems was detected, separate mediation analyses were conducted for boys and girls.

Figure 2 shows the mediation model for boys. An insignificant total effect was found for sexual abuse on resilience, $b = -.08$, $t = -.97$, $p = .33$, i.e., when self-esteem was not in the model, sexual abuse did not significantly affect resilience for boys. A significant indirect effect between sexual abuse and resilience was found through self-esteem, $b = -.21$, BCa CI [-.31, -.11], hence experiencing sexual abuse indirectly increased resilience through self-esteem. Sexual abuse significantly predicted lower self-esteem, $b = -.28$, $t = -4.63$, $p < .001$, and self-esteem significantly predicted higher resilience, $b = .73$, $t = 18.49$, $p < .001$. A positive direct effect between sexual abuse and resilience was insignificant, $b = .12$, $t = 70$, $p = .09$. Therefore, results suggest the relationship between sexual abuse and resilience was fully mediated by self-esteem in boys. The analysis indicated that sexual abuse and self-esteem explained statistically 27.7% of the variance in resilience for boys ($R^2 = .277$).

Figure 2

The Mediating Role of Self-Esteem in the Relationship Between Sexual Abuse and Resilience

Among Boys

Note. ** Coefficients are significant at the .001 level.

Figure 3 displays the mediation model for girls. A significant total effect was found for sexual abuse on resilience, $b = -.11$, $t = -2.12$, $p < 0.05$, i.e., sexual abuse significantly predicted lower resilience when self-esteem was not in the model. A significant indirect effect between sexual abuse and resilience was found through self-esteem, $b = -.21$, BCa CI [-.27, -.15], hence experiencing sexual abuse indirectly increased resilience through self-esteem. Sexual abuse significantly predicted lower self-esteem $b = -.33$, $t = -7.14$, $p < .001$, and higher self-esteem significantly predicted higher resilience, $b = .64$, $t = 20.36$, $p < .001$. However, the increasing direct effect of sexual abuse on resilience was still significant for girls, $b = .09$, $t = 70$, $p < .05$, although the strength of the relationship was reduced and was therefore partially mediated by self-esteem. The analysis indicated that sexual abuse and self-esteem explained statistically 30.3% of the variance in resilience for girls ($R^2 = .303$). The two mediation analyses supported the fourth hypothesis, stating that self-esteem mediated the impact of sexual abuse on resilience in boys and girls.

Figure 3

The Mediating Role of Self-Esteem in the Relationship Between Sexual Abuse and Resilience

Among Girls
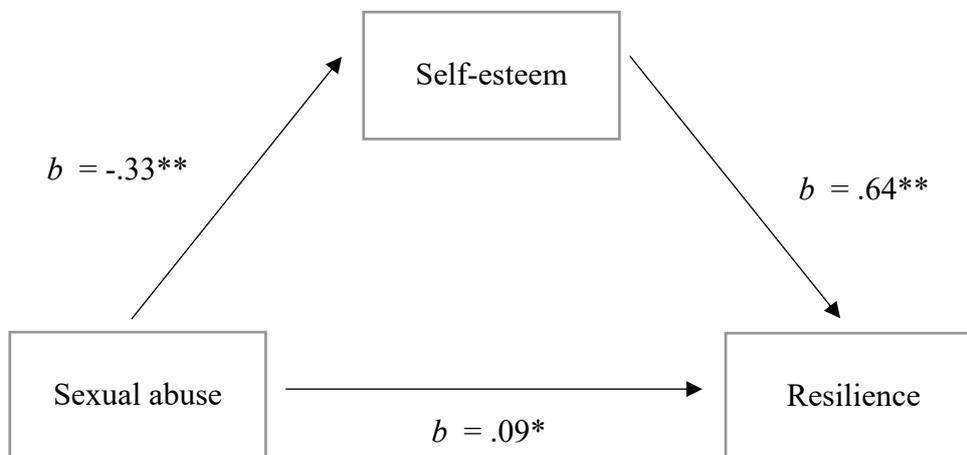
Note. * Coefficients are significant at the .05 level; ** Coefficients are significant at the .001 level.

Discussion

The aim of the present study was to examine resilience in sexual abuse victims and determine if - and how - self-esteem influences resilience in victims of sexual abuse. The results supported the first hypothesis, indicating that sexual abuse victims have significantly less resilience than non-victims. While there is a deficiency in research on the relationship between sexual abuse and resilience, these results are in line with some studies that suggest that sexual abuse negatively impacts victims' psychological functioning (Domhardt et al. 2015; Hébert et al., 2014). Secondly, it was hypothesized that there is a positive correlation between self-esteem and resilience in adolescents. This was tested and supported with correlation analysis, which is consistent with previous research that has demonstrated positive association between self-esteem and resilience (Benetti & Kambouropoulos, 2006).

The results supported the third hypothesis by demonstrating that the relationship between self-esteem and resilience in sexual abuse victims interacts with gender. Overall,

boys scored higher on the resilience scale compared to girls, regardless of sexual abuse exposure. This is in line with other studies that suggest that women score lower on resilience measures compared to males (Stratta et al., 2013). In addition, it has been found that the genders respond differently to stressful events, in which women are more likely to develop stress disorders following traumatic experiences (Bangasser & Valentino, 2014). For example, studies have found that sexually abused females are more probable to have high levels of PTSD compared to sexually abused males (Hébert et al., 2014).

Lastly, it was hypothesized that self-esteem mediates the impact of sexual abuse on resilience in boys and girls. This was tested and supported with two separate mediation analyses for boys and girls using the Hayes Process Macro tool for SPSS. Findings revealed that the relationship between sexual abuse and resilience was fully mediated through self-esteem in boys, and partially mediated through self-esteem in girls. This indicates that higher self-esteem leads to higher resilience in victims of sexual abuse. When self-esteem was not in the model, sexual abuse was negatively related to resilience, both among boys and girls. However, when controlling for the mediation effect of self-esteem, the relationship between sexual abuse and resilience changed, i.e., it changed from a negative relationship into a positive relationship. This suggests that self-esteem is a crucial factor in the development of resilience following sexual abuse in adolescents.

The relationship between sexual abuse and resilience was stronger among girls than boys while controlling for self-esteem, which may suggest that girls are more vulnerable to the effects of sexual abuse compared to boys. There is a lack of research defining the relationships between sexual abuse, resilience, and self-esteem. However, studies have found that self-esteem mediates the relationship between abuse and depression and has been identified as a protective factor in physical abuse victims (Arslan, 2016; Stein et al., 2002). Furthermore, a positive relationship has been found between self-esteem and resilience

(Benetti & Kambourpoulos, 2006), and self-esteem has been identified as a contributor to increased resilience, meaning that it can be a protective factor against interpersonal problems in sexual abuse victims (Domhardt et al., 2015; Herrman et al., 2011; Jonzon & Lindblad, 2006;), and an indicator of resilience (Domhardt et al., 2015), emphasizing its importance for victims of sexual abuse.

The strengths of the present study lie in the research design, coverage of the student population and the high response rate. All registered students in Iceland that attended school on the day the survey was administered participated which increases reliability of results. This, along with the equal gender distribution in the sample selected, provides a good base for statistical inference. Another strength worth mentioning are the measures for resilience and self-esteem. The Connor-Davidson Resilience Scale and the Rosenberg Self-Esteem Scale have been tested and validated extensitvely in past research (Connor & Davidson, 2003; Hagborg, 1993; Scali et al., 2012). A limitation of the study was that resilience, the dependent variable, is a process that changes over time and is therefore best studied using longitudinal research designs rather than cross-sectional designs (Marriott et al., 2014). Another limitation was that the data was self-report data, that relies on individual's own report of their behavior. Self-report measures can be subjective and impacted by participants' characteristics. For example, when it comes to sexual abuse or indecent behavior, there are known cultural variations in what is considered inappropriate touching or harassment, thus, responses may differ between individuals in various social groups or over time (Lanning & Dietz, 2014; Mathews, 2017; Wurtele, 2012).

Despite its limitations, the study provided relevant information on Icelandic adolescents pertaining to resilience, sexual abuse, and self-esteem. A vast number of studies have examined the adverse consequences of sexual abuse, however, there is a need for further research regarding resilience and positive coping among sexual abuse victims, as well as

studies on gender differences in resilience and self-esteem following sexual abuse. The indication that self-esteem increases resilience in victims of sexual abuse emphasizes the crucial role of self-esteem as a protective factor in sexual abuse victims. For further understanding on how to contribute to resilience following experience of sexual abuse, additional research is needed on other protective factors and mediators that promote resilience such as parental support, peer support, education, and social status. Longitudinal studies are needed to analyze the impact of sexual abuse on victims' resilience, functioning, and coping over time. Nevertheless, the results of the current study and previous studies emphasize the importance and opportunity for promoting self-esteem and self-image in adolescents to minimize adverse consequences of sexual abuse and find ways to contribute to positive adaptation and functioning among victims. For practical implications, it is crucial for therapists, counselors, and individuals working in the field of psychology to recognize and understand the gender difference pertaining to the impact of sexual abuse to improve therapeutic practices and implementations for victims of sexual abuse. In conclusion, the results highlight the importance of further understanding on what distinguishes individuals who demonstrate resilience apart from those who develop psychopathology following sexual abuse, which is crucial for improving preventative efforts for children and adolescents exposed to violence and abuse.

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