

# **Maltreatment, Internalizing symptoms and Their Association with School Attendance Problems in Finnish Youth**

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Masters Thesis in Psychology

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**ÅBO AKADEMI UNIVERSITY – FACULTY OF ARTS, PSYCHOLOGY AND THEOLOGY**

<b>Subject:</b> Psychology	
<b>Author:</b> Jenny Langenskiöld	
<b>Title:</b> Maltreatment, internalizing symptoms and their association with school attendance problems in Finnish youth	
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<b>Abstract:</b> A small number of previous studies have found a connection between maltreatment and increased absence from school in children and adolescents, but this connection remains relatively unexplored. Evidence that mental health is affected by, and implicated in the background of, both cases of maltreatment and school attendance problems could suggest that mental health problems (and specifically internalizing symptoms) explains the relationship between maltreatment and school attendance problems. The present study investigates the relationship between three different types of maltreatment – physical abuse, emotional abuse and neglect – and school attendance problems in the form of absence due to truancy and absence due to illness in a nationwide sample (N=86 862) of Finnish youth in the 8 <sup>th</sup> and 9 <sup>th</sup> grade. The study also investigates whether mental health problems, operationalized here as symptoms of anxiety and depressive symptoms, mediated this connection. Data was collected through the School Health Promotion survey in all counties in Finland during spring 2019. The study used factor analysis, cumulative analysis and path analysis as methods. The results showed that all three types of maltreatment significantly increased the odds of both types of absence. A mediation effect of both types of internalizing symptoms on the relationship between emotional abuse and school attendance problems, and of depressive symptoms on the relationship between physical abuse and school attendance problems, was also found. Maltreated adolescents were hereby found to be at increased risk for both internalizing symptoms and school attendance problems, which further highlights them as an especially vulnerable group of absentees. The current study pioneers in establishing these mediation effects. The importance of the results for future research and the limitations created by the complexity of the studied subjects are discussed.	
<b>Keywords:</b> maltreatment, school attendance problems, internalizing symptoms, adolescents	
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**ÅBO AKADEMI – FAKULTETEN FÖR HUMANIORA, PSYKOLOGI OCH  
TEOLOGI**

<b>Ämne:</b> Psykologi	
<b>Författare:</b> Jenny Langenskiöld	
<b>Title:</b> Misshandel, internaliserade symtom och deras samband med skolfrånvaro hos finska ungdomar	
<b>Handledare:</b> Katarina Alanko	
<b>Abstrakt:</b> <p>Ett begränsat antal tidigare studier har funnit en koppling mellan misshandel och ökad skolfrånvaro hos barn och ungdomar, men detta samband är hittills relativt outforskat. Tidigare bevis för att den psykiska hälsan är såväl påverkad av som en bakgrundsfaktor för både fall av misshandel och skolfrånvaro kunde antyda att symtom på psykisk ohälsa (och specifikt internaliserade symtom) skulle förklara sambandet mellan misshandel och skolfrånvaro. Den aktuella studien undersöker sambandet mellan tre typer av misshandel – fysisk misshandel, emotionell misshandel och bristande omsorg – och skolfrånvaro i form av skolk och sjukfrånvaro i ett nationellt sampel (N=86 862) av finländska ungdomar från klass 8 och 9. Studien undersöker också huruvida psykisk ohälsa, här operationaliserat som internaliserade symtom, medierar detta samband. Datamaterialet är insamlat via enkäten Hälsa i skolan i samtliga kommuner i Finland under våren 2019. Studien använder faktoranalys, kumulativ regressionsanalys och stiganalys som metod. Resultaten visade att alla tre typer av misshandel signifikant ökade oddsen för båda typerna av frånvaro. En medieringseffekt av båda typerna av internaliserade symtom i sambandet mellan emotionell misshandel och skolfrånvaro, och av depressiva symtom i sambandet mellan fysisk misshandel och skolfrånvaro, hittades även. Därmed är risken för både internaliserade symtom och skolfrånvaro förhöjd för misshandlade ungdomar, vilket vidare understryker sårbarheten hos denna undergrupp av frånvarande elever. Denna studie är den första att upptäcka dessa medieringseffekter. Betydelsen av resultaten för kommande forskning och begränsningar orsakade av komplexiteten i de undersöka ämnena diskuteras.</p>	
<b>Nyckelord:</b> misshandel, skolfrånvaro, internaliserade symtom, ungdomar	
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## **Maltreatment, Internalizing symptoms and Their Association with School Attendance Problems in Finnish Youth**

There is widespread agreement on the detrimental effects of school attendance problems - prolonged absence from school has the potential to affect normal development negatively through a number of mechanisms and in a number of ways (Gubbels et al., 2019; Heyne et al., 2019). Much like school attendance problems, childhood maltreatment has also repeatedly been associated with a variety of serious, negative outcomes (Maclean et al., 2020; Russotti et al., 2021). Both concepts are the subject of considerable scientific interest worldwide, with focus on both etiology, prevention and care. Further, research has also established a connection between maltreatment and school attendance problems (Armfield et al., 2020). However, the research on this specific connection is lacking both internationally and nationally, perhaps influenced by the complexity and multi- as well as equifinality associated with both subjects. Earlier research has shown that mental health problems are more frequent in maltreated absentees than in the non-maltreated, and the possible pathway from maltreatment to absence via internalizing symptoms has been suggested to be an important task for forthcoming research efforts (Hagborg et al., 2018).

### **School attendance problems; conceptual framework, associated outcomes and risk factors**

School attendance problems are multi-faceted both in terms of presentation and background factors, as well as on a conceptual level (Heyne et al., 2019). The conceptual inconsistencies in the field cause a lack of common understanding and create a need for clarification of use of terminology to facilitate comparison between studies. In an attempt to disentangle the current state of conceptualization, Heyne et al. state that a distinction between when absence is problematic and when it is not is foremost to be established, and further note that there is a growing inclination towards Kearney's definition of school attendance problems in the scientific field (2019). In line with Kearney's definition, non-problematic absence can be categorized as absence that both adults in school and at home have agreed upon as being legitimate, and that is considered to not be harmful for the child. This type of absence includes for example absence due to illness. Problematic absence, in turn, is determined by three criteria; missing at least 25% of total school time during the last two weeks, the attendance problems being severe enough as to disrupt the family's routines or, thirdly, being absent a minimum of 10 days out of any given 15-day period of the school year

(Hancock et al., 2021; Heyne et al., 2019). This form of absence entails, for instance, ‘skipping school’, i.e. truancy. However, it is not as simple as to assume that when academic literature refers to problematic absence, -absenteeism or school attendance problems, it always concerns excessive absence that is unexcused - i.e. the result of truancy - and conversely that absence described as due to illness is never problematic. Although the rather rudimentary division between problematic and non-problematic absence does correspond to the data of the current study, where participants are only asked to report whether the absence was due to illness or truancy, the notion that not all research takes intentionality into account in the same way when defining absenteeism is still noteworthy in the context of this study. The current study will primarily use the widely used terms school attendance problems (SAPs) and absenteeism both when referring to the phenomenon in general and to previous research, but does not pretend to know whether all the previous research that is discussed has taken intentionality and problematic frequency into account in a similar way.

There is, however, a greater consensus concerning the negative effects of excessive absence from school. School attendance problems have been found to be associated with a variety of negative outcomes, some of the most prominent being mental health problems, poor academic achievement, school drop-out, delinquency and substance abuse (Gubbels et al., 2019; Hagborg et al., 2018; Heyne et al., 2019). School attendance problems are perhaps specifically relevant in the context of academic success, seeing as they are considered to have one of the most robust predictive effects on academic failure (Hagborg et al., 2018). Keppens et al. also highlight social deviant behavior as an example of the complicated patterns school attendance problems can be a part of - SAPs are considered a risk factor for social deviant behavior, but these types of behaviors, in turn, have a tendency to increase the absence itself even more (2019). The etiology of SAPs is, in turn, assumed to be the result of multiple, interrelated factors, ranging from characteristics of the child or the family to those of the school and the peers (Gubbels et al., 2019). Examples of these risk factors are internalizing and externalizing problems of the child, low socioeconomic status, parental psychiatric problems, antisocial or truant peers and a school that fails to meet the needs of the pupils (Gubbels et al., 2019; Hagborg et al., 2018).

### **Maltreatment and school attendance problems**

Child maltreatment is used as an umbrella term for various types of abuse of children. It includes both physical, sexual and emotional abuse, as well as neglect or negligent

treatment, interfering with development by either causing actual physical or emotional harm and maladaptation or increasing the risk of such (Cui et al., 2020; Nasvytienė et al., 2012). The found adverse effects of maltreatment on child and adolescent development have gained repeated support in the academic field. Maltreatment has consistently been connected with negative outcomes in several developmental areas, including both internalizing and externalizing problems as well as poor interpersonal skills, poor cognitive performance and different problems in school functioning and academic achievement (Hagborg et al., 2018; Maclean et al., 2020; Rouse & Fantuzzo, 2009; Russotti et al., 2021; Schneider, 2020; Shonk & Cicchetti, 2001; Slade & Wissow, 2007). Some scholars have even suggested that maltreated children experience a three times greater risk for psychopathology compared to non-maltreated children, leaving maltreatment one of the most powerful detrimental influences on mental health (Russotti et al., 2021).

Maltreatment has also been found to be connected with increased absence from school (Armfield et al., 2020). Even so, the number of studies that have found support for this association is still rather small, and as Armfield et al. conclude, this body of evidence is not without limitations (2020). Thereby, the association between maltreatment and school attendance problems is yet lacking a stable evidence base. Further establishing and investigating this connection is important for many reasons, not in the least because of the harmful interaction of these two variables that Hagborg et al. highlight; while both maltreatment and SAPs are predictive of poor academic success, academic success has simultaneously been shown to be one of the most robust protective factors against the mental health problems experienced by maltreated children (2018). Consequently, experiences of maltreatment seem to enhance the risk of school attendance problems and the SAPs, in turn, decrease the risk of academic success, which could be a protective factor for the negative effects of maltreatment on the child's or adolescent's well-being.

As to how experiences of maltreatment affect absence from school, the pathways are not obvious. Beyond the fact that maltreatment is not a distinct event but can manifest itself in a variety of ways, maltreatment also tends to occur simultaneously with several other adversities (Armfield et al., 2020; Hancock et al., 2021; Maclean et al., 2020). This creates multi-risk contexts that are difficult to disentangle. Hence the maltreated child or adolescent can be absent from school as a result of, for example, the direct physical consequences of abuse or neglect, i.e., either not wanting or not being able to go to school



because of physical trauma, or not being able to actively participate in school as a result of not being fed, clothed or otherwise assisted properly due to neglective parenting (Armfield et al., 2020). Further, other disadvantageous, socioeconomic contextual factors that covariate with the maltreatment – for example, poverty resulting in transport problems – may also be the reason behind the absence (Hancock et al., 2021). Absence is additionally also assumed to have a bidirectional relationship with for example parental conflict, in which case the adolescent's absence causes more conflict at home which, in turn, increases the absence (Duke, 2020).

Armfield et al. described some previous evidence for serious neglect having the strongest predictive effect on absenteeism, compared to other types of maltreatment, and found support for this in their own study as well (2020). Additionally, the research on effects of different types of maltreatment on SAPs is not, to my knowledge, substantial. However, general evidence shows that emotional abuse and neglect are more strongly associated with internalizing symptoms while physical abuse is considered to have a more robust connection with externalizing symptoms (Armfield et al., 2020; Augusti et al., 2018; Cohen & Thakur, 2021; Zhou & Zhen, 2022). This type of evidence is, however, not unambiguous. For example Augusti et al. (2018) call for caution and note how the evidence on this is not consistent and how, for example, subtle symptoms displayed by a neglected child can be more difficult to notice than the more visibly expressed symptoms by an abused child. This then complicates the determination of certain symptoms as externalizing and certain ones as internalizing. Further, emotional abuse is also argued to more likely forebode mental health problems in later adolescence while physical abuse is considered to more strongly affect well-being in early adolescence (Cohen & Thakur, 2021).

### **Mental health problems as a possible mediator of the association between maltreatment and school attendance problems**

There is broad evidence for mental health problems in both children with a history of maltreatment and children who are absent from school. Specifically internalizing symptoms have long been investigated in conjunction with school attendance problems, with depression and anxiety having been found to be the most frequent emotional problems amongst absentees (González et al., 2018). There is also a significant amount of support for the connection between maltreatment and destructive consequences on mental health,

including internalizing symptoms (Cohen & Thakur, 2021; Romano et al., 2015; Russotti et al., 2021). Despite this, little academic interest seems to have been directed towards investigating whether mental health problems could have a mediating role in the relationship between maltreatment and school attendance problems. The need to bring clarity to how these three concepts (maltreatment, mental health problems and school attendance problems) might be connected to each other becomes evident in the discussion by other scholars. For instance, while school attendance problems are considered a risk factor for psychopathology, they are conversely also regarded as a symptom of underlying psychopathology and both internalizing and externalizing symptoms have been found to precede school attendance problems (Gubbels et al., 2019; Hagborg et al., 2018). Directionality and interconnectivity are also discussed by Hancock et al. (2021), who note how mental health problems are connected to many of the same background factors as school attendance problems and how the specific effect of mental health problems on SAPs is difficult to determine especially in multiple-risk cases.

Thus, maltreatment, mental health problems and school attendance problems are closely intertwined and the possible directions for the connection are many. To my knowledge, no studies to date have established either mental health problems in general or internalizing symptoms in particular as a mediating factor in the specific relationship of maltreatment and school attendance problems, but other scholars have approached the subject. In line with how Hancock et al. (2021) consider the possibility of contextual risk factors to be connected to increased absence, not directly but via a mediating factor, it is plausible to consider that maltreatment could increase absence via the influence of mental health problems. In such a scenario, the adolescent would suffer from internalizing symptoms as a result of the experienced maltreatment, and the symptoms of anxiety or depression would be the reason for avoiding school. There is, further, support for the role of mental health in the relationship between maltreatment and academic success. Slade and Wissow have suggested that mental health might mediate the connection between maltreatment and academic performance (2007). Romano et al. also underline that, considering how maltreatment affects both academic success and mental health and since both constructs affect each other, it would be justified to include mental health in the theoretical conception of academic success in maltreated children (2015). Previous research could, thus, be interpreted to suggest that mental health problems could mediate the relationship between maltreatment and absenteeism, which constitute the basis for the current study's aim to investigate the possible

mediation by internalizing symptoms on the relationship between maltreatment and school attendance problems.

### **Adolescence as an age group in the context of maltreatment and school attendance problems**

The risk for developing school attendance problems has been found to increase with age (Gubbels et al., 2019). Research has also suggested that, regarding adolescents with a background of maltreatment, problems with school attendance commonly start to appear in high-school (Hagborg et al., 2018). Maltreated children are overall argued to be disadvantaged later on in school, since the effects of maltreatment generally become aggravated as a result of the heightened academic and social requirements, and adolescence is generally considered to entail a significant vulnerability for mental health problems and risk-taking behaviors (Hagborg et al., 2018; Wadman et al., 2020). Cohen and Thakur found that, unlike earlier research that has primarily linked neglect with negative impacts on early childhood development, both emotional abuse and neglect that occurs in adolescence has a unique effect on mental health in the adolescent (2021).

Moreover, in a national study using the same data as the current study, Virrankari et al. (2019) found a connection between parental emotional abuse and the experience of inclusion in school. Virrankari et al. state that the difference between the abused and non-abused group was biggest in the 8th and 9th grade compared to upper secondary school and vocational school, and highlight the relevance of the 8th and 9th graders' emotional and economic dependence on their parents in the explanation of this difference (2019). Emancipation and the strife for independence are two of the most salient features of the developmental perspective on adolescence, which might constitute a risk for overseeing how big the influence of family factors still is in the lives of adolescents. Results such as these suggest that adolescence might be a sensitive period for school attendance problems in maltreated children, and that it might be of particular relevance to investigate the relationship between maltreatment and school attendance problems in this particular age group.

### **Current study**

Investigating the relationship between maltreatment and school attendance problems is both theoretically and practically ambiguous, since both problems encompass several similar and interrelated phenomena. Both maltreatment and SAPs display multifinality

in terms of outcomes and they can both conversely be the outcome of many different etiological factors (Hagborg et al., 2018). Adolescent absentees with a history of maltreatment are, moreover, an especially vulnerable group in this context. There is not only a shortage of research specifically targeting the maltreated, adolescent absentees (Hagborg et al., 2018), but research on the unexplained relationship between maltreatment and school attendance problems is also lacking (Armfield et al., 2020). Mental health problems in the form of internalizing symptoms have not yet been incorporated as a possible mediator in said relationship.

By investigating the effects of different types of maltreatment on both absence due to truancy and absence due to illness, as well as the role of internalizing symptoms in the relationship of these variables, the current study hopes to create insight into these mechanisms.

### **Aim and research questions**

The aim of the present study was to investigate the possible connections between maltreatment and school attendance problems in Finnish adolescents in the 8th and 9th grade. The study also looked at whether that connection is mediated by the adolescent's mental health problems in the form of internalizing symptoms. As presented in the introduction, some previous studies have found experiences of maltreatment and school attendance problems to be interrelated. A history of maltreatment has further been found to predict mental health problems and mental health problems have been discovered to be a risk factor for developing school attendance problems. However, since previous literature on both the relationship between maltreatment and school attendance problems and the possibly different effects of different types of maltreatment, I decided to form explorative research questions instead of forming an hypothesis. By exploring this subject, the current study aims to create a stepping stone for future research to investigate these mechanisms even further and in the long term develop better-targeted interventions for this especially vulnerable group of absentees.

The research questions were:

1. Is there a connection between self-reported experiences of physical abuse by parents or guardians, and school attendance problems in Finnish adolescents in the 8th and 9th grade?

2. Is there a connection between self-reported experiences of emotional abuse by parents or guardians, and school attendance problems in Finnish adolescents in the 8th and 9th grade?
3. Is there a connection between self-reported experiences of neglect by parents or guardians, and school attendance problems in Finnish adolescents in the 8th and 9th grade?
4. How does self-reported internalizing symptoms explain the connection between the different types of maltreatment and school attendance problems?

## **Methods**

In the following chapter, the data collection procedure and sample characteristics, as well as use of measures and construction of variables, will be described.

### **Data collection**

The data material was collected via the School Health Promotion study (SHP), which is a nationally distributed survey for Finnish children and adolescents in certain age groups. The SHP measures well-being, health and school work cross-sectionally every other year. The survey is administered by the Finnish Institute for Health and Welfare (Terveyden ja hyvinvoinnin laitos, THL) and is filled out anonymously, during school hours and under teacher observation, as an online or pencil- and paper-survey. The data used in the current study was obtained from the version of the survey that is directed to adolescents in the 8th and 9th grade and was collected in March and April 2019 (THL, 2022).

### **Sample characteristics and representability**

As a result of the Finnish primary education being both compulsory and free of charge and the SHP being distributed to all counties in Finland, the data collection has a wide range and results in a fairly representative sample. The survey of 2019 was answered by a total of 89 502 Finnish adolescents in grade 8 and 9, thereby giving the original data material used for this study a coverage of 75% in the targeted age group (THL, 2022). Although data from some counties were excluded by the institute (for more information about these and other delimitations, see THL, 2022), data from 282 (THL, 2022) out of 311 counties in

Finland (Tilastokeskus, 2019) were included in the final data material. As a further delimitation, I chose to include only respondents aged 13-17 years in the current study, as this is the typical age for adolescents in grade 8 and 9 in Finland. The mean age of the current sample is 15.33, standard deviation 0.62. The characteristics of the sample are further described in the following chapter and in Table 3.

## **Measures**

All variables in the current study were created from questions in the SHP-survey. Constructions of variables are described below, as well as considerations regarding the analytic strategy path analysis. Cronbach's alphas for each scale are reported together with the factor analysis.

### ***Descriptive variables***

The descriptive variables were gender, grade and parent's educational level. The current study uses a gender variable based on official gender (girl/boy). The answer options for grade was either 8th or 9th grade. A proxy for family socioeconomic status was derived through one question that asked the adolescent on which educational level his/her parents have gotten their highest degrees. The alternatives were "Elementary school or other comparable education", "High school or vocational school", "Vocational studies on top of high school or vocational school" and "University, university of applied sciences or other college-studies". The adolescent was assigned to match "Mother", "Father" and "Other parent" with the right alternative.

### ***Maltreatment***

Maltreatment was operationalized as three categories: physical abuse, emotional abuse and neglect, derived from the adolescent's self-reported experiences of said subtypes of maltreatment in the survey. Maltreatment within the family was measured by the SHP in a section separate from abuse or maltreatment experienced elsewhere, defining parents as either a mother, father, stepmother or stepfather, adoptive parents, foster parents or a guardian from child protection services. The questions from the survey that were used to form the abuse variables, as well as their factor loadings and communality estimates, are displayed in Table 2.

The neglect variable was, however, not included in the mediation analysis. This decision was justified since the construct of neglect was measured using only one variable with categorical responses.

### ***Internalizing symptoms***

Mental health problems are here investigated as the presence of internalizing symptoms, i.e. the adolescent's self-reported symptoms of anxiety and depression. For the operationalization of internalizing symptoms, the current study used the established instruments 7-item Generalized Anxiety Disorder Scale (GAD-7, Löwe et al., 2008) and the Beck Depression Inventory- II (BDI-II, Wang & Gorenstein, 2013). The psychometric qualities of GAD-7 as a screening instrument have been evaluated in both clinical and normative samples, with positive results regarding validity and reliability (Löwe m.fl., 2008; Plummer m.fl., 2016; Spitzer m.fl., 2006). Löwe et. al provide further evidence for its usefulness by presenting positive psychometric qualities in a normative sample of up to 14 year olds (2018), which matches the characteristics of the sample in the current study. Similarly, BDI-II has shown good psychometric properties in both adult and adolescent samples, including non-clinical adolescent samples, such as the one in the current study (Osman et al., 2008; Wang & Gorenstein, 2013).

In the SHP survey, GAD-responses are given on a four point scale including the options “Not at all”, “On several days”, “Most of the days” and “Almost every day” for seven different statements. BDI-responses also encompass four different answer alternatives on a hierarchical scale for every symptom (see Table 1 for the GAD-statements and BDI-symptoms). This study will refer to symptoms of anxiety and depressive symptoms, since the questions in the SHP survey are not diagnostically qualifying.

### ***Factor analysis and the construction of summary variables***

With the purpose of creating summary variables out of the explanatory variables, all 30 items in the SHP that were used to represent the three types of maltreatment and two types of internalizing symptoms were included in a factor analysis. The factor analysis generated five factors with eigenvalues  $>1$ , and all these five were extracted; one for

physical abuse (Factor 1), one for emotional abuse (Factor 4), one for neglect (Factor 5) one for symptoms of anxiety (Factor 2) and one for depressive symptoms (Factor 3). The eigenvalues, percentages of variance and cumulative percentages for the analysis are presented in Table 1. The questions used to form the items, and the factor loadings and communality estimates for each item, are displayed in Table 2.

**Table 1**

*Eigenvalues, Percentages of Variance and Cumulative Percentages for factors*

Factor	Eigenvalue	% of variance	Cumulative %
1	10.35	34.51	34.51
2	4.63	15.43	49.94
3	1.59	5.29	55.23
4	1.21	4.03	59.25
5	1.04	3.45	62.70

**Table 2**

*Results From the Factor Analysis of the Items From the School Health Promotion (SHP) survey*

SHP item	Factor loading					
	1	2	3	4	5	c
Physical abuse						
1) Has your parent hit, beaten, kicked or physically abused you in some other way?	<b>0.52</b>	0.07	0.14	0.42	0.12	0.48
2) Has your parent, during the last 12 months, grabbed you in a way that hurt?	<b>0.68</b>	0.11	0.10	0.43	-0.08	0.68
3).. pushed or shook you angrily?	<b>0.75</b>	0.09	0.07	0.31	0.05	0.68
4) .. pulled your hair?	<b>0.73</b>	0.07	0.07	0.21	0.02	0.60
5) .. slapped you?	<b>0.78</b>	0.07	0.07	0.16	0.15	0.68
6) .. hit you with his/her fist or an object?	<b>0.75</b>	0.06	0.08	-0.02	0.34	0.70
7) .. kicked you?	<b>0.75</b>	0.06	0.08	-0.03	0.36	0.70
8) .. hurt you physically in any other way?	<b>0.75</b>	0.08	0.09	0.14	0.23	0.66
Emotional abuse						
9) Has your parent scolded, offended, humiliated or threatened you or made you feel unwanted?	0.19	0.19	0.24	<b>0.74</b>	0.05	0.68



# MALTREATMENT, INTERNALIZING SYMPTOMS AND THEIR ASSOCIATION WITH SCHOOL ATTENDANCE PROBLEMS IN FINNISH YOUTH17

10) Has your parent, during the last 12 months, refused to talk to you for a long period of time?	0.17	0.14	0.07	<b>0.49</b>	0.46	0.51
11) .. hurt you verbally, for example by scolding?	0.17	0.17	0.15	<b>0.79</b>	0.04	0.70
12) .. humiliated or embarrassed you?	0.17	0.17	0.13	<b>0.66</b>	0.20	0.55
13) .. threatened to abandon you or leave you alone?	0.29	0.10	0.07	<b>0.44</b>	0.52	0.56
14) .. thrown, hit or kicked objects (for example slammed doors)?	0.37	0.12	0.06	<b>0.61</b>	0.14	0.55
15) .. locked you in somewhere?	0.38	0.06	0.06	0.12	<b>0.67</b>	0.61
16) .. threatened you with violence?	<b>0.53</b>	0.07	0.05	0.36	0.37	0.55
Neglect						
17) Has your parent left you without food, drink, clean clothes or a clean and warm place to live for a long period of time?	0.23	0.05	0.17	0.11	<b>0.65</b>	0.52
Symptoms of anxiety						
8) How often have you, during the last two weeks, felt nervous, tense or anxious?	0.06	<b>0.78</b>	0.31	0.15	0.00	0.73
19).. been unable to stop or control your worry?	0.07	<b>0.83</b>	0.27	0.09	0.06	0.78
20).. been overly worried about different things?	0.06	<b>0.83</b>	0.23	0.09	0.05	0.76
21).. had difficulties relaxing?	0.07	<b>0.78</b>	0.28	0.11	0.06	0.71
22).. felt so restless that it has been hard to stay put?	0.11	<b>0.67</b>	0.20	0.13	0.10	0.53
23).. had a tendency to get easily annoyed or irritated?	0.07	<b>0.70</b>	0.27	0.19	0.00	0.60
24).. had a fear that something bad might happen?	0.08	<b>0.68</b>	0.28	0.08	0.07	0.56
Depressive symptoms						
Choose the option that best describes you from each chunk of alternative mood descriptions:						
25) feeling sad and unhappy	0.12	0.35	<b>0.71</b>	0.11	0.09	0.66
26) scared or pessimistic about the future	0.08	0.30	<b>0.69</b>	0.11	0.07	0.59
27) feeling satisfied and being able to enjoy things	0.10	0.28	<b>0.72</b>	0.09	0.11	0.63
28) feeling guilty	0.10	0.38	<b>0.66</b>	0.12	0.09	0.62
29) self-hatred	0.08	0.34	<b>0.73</b>	0.17	0.02	0.69
30) indecisiveness	0.08	0.35	<b>0.66</b>	0.13	0.07	0.60

Factor loadings ranged from -0.02 to 0.78 on physical abuse, 0.04 to 0.79 on emotional abuse, 0.05 to 0.65 on neglect, -0.00 to 0.83 on anxiety and 0.02 to 0.73 on depression. Two items (item number 15 and 16) that in the questionnaire were intended to measure emotional abuse, loaded on other factors than Factor 4 which the majority of the emotional abuse items loaded on. Since both items also loaded, albeit lower, on the fourth

factor, I decided to keep the original position of the items and include them in the factor for emotional abuse (Factor 4). The only item on the neglect scale (item number 17) loaded on Factor 5, and although it also loaded weakly on Factor 4, a decision was made to keep its original position. This was based on theoretical consideration, since previous research has found support for the use of three violence- or maltreatment scales (Mielityinen et al., 2021). The sum variables were used with one minor change. Both physical abuse and emotional abuse had one item (item number 1 and 9) with a different scale than the remaining items. These items were included in the factor analysis but were excluded from the sum variables of physical and emotional abuse. This decision was made after an initial logistic regression including these variables, compared to an analysis without these items, after which it was concluded that these two items did not add additional information to the results and could, therefore, be excluded. The internal consistency for all factors was good, the standardized Cronbach alpha of Factor 1 was 0.91, 0.92 for Factor 2, 0.88 for Factor 3 and 0.85 for Factor 4.

### ***School attendance problems***

Absence was examined through two variables; absence due to truancy and absence due to illness. The operationalizations are derived from one question, which asks the adolescent to enter how often he or she has been absent due to truancy or absent due to illness during the last year. The answer options were “Almost never”, “A few times per year”, “Every month”, “Every week” and “Every day or almost every day”. With the purpose to create categorical variables, answers were coded from these five alternatives into three categories for both types of absence; low, moderate and high. Daily or weekly absence due to either truancy or illness formed the category “high” for respective types of absence. Monthly or yearly truancy formed the ‘moderate’ category for truancy and the moderate category for illness constituted of monthly absences due to illness. The ‘low’ category included no truancy at all and the same category for illness included either yearly or no illness absence at all. Forming three categories was motivated by the aim to keep the study comparable with other studies; Alanko et al. used this categorization to be able to compare the occurrence of absenteeism over time, since the item wording was slightly altered during the study period of 20 years (Alanko et al., 2022).

In the path analysis, a combined absence variable was used, which combines both variables. This decision was motivated by the findings in the regression analysis, which showed a significant effect of physical and emotional abuse on both absence due to illness and absence due to truancy. For this reason, separating the different types of absence in the path analysis was not considered necessary.

### *Analytic strategy path analysis*

The analysis for the mediation model were conducted with the program Mplus 8 (Muthén & Muthén, 2017). The path model was planned and conducted by statistician Janne Engblom. First, associations between the predictor, outcome and mediating variables in the model were established, according to the criteria established by Baron and Kenny (1986). Thereafter, direct and indirect effects were measured with the model (see Figure 1). All other analyses were conducted using SAS 9.3 software. The cumulative logistic regression yields estimated adjusted odds ratios (OR) with 95% confidence intervals (CI).

## **Results**

### **Descriptive statistics**

Out of the whole included sample (N=86 862), 44 167 respondents attended 8th grade and 42 435 attended 9th grade at the time the survey was distributed. The distribution of variables across the study population is displayed in Table 3.

**Table 3**

*Frequencies of study population*

Observed variables	Total		Girls		Boys	
	N	%	Mean	n/%	Mean	(n)/%
Absence due to truancy	85491	100	-	43516	-	41975
Low	61404	71.83	-	74.71	-	68.84
Moderate	20956	24.51	-	21.95	-	27.17
High	3131	3.66	-	3.35	-	3.99
Absence due to sickness	85510	100	-	43542	-	41968

## MALTREATMENT, INTERNALIZING SYMPTOMS AND THEIR ASSOCIATION WITH SCHOOL ATTENDANCE PROBLEMS IN FINNISH YOUTH<sup>20</sup>

Low	645779	75.5	-	73.73	-	77.33
Moderate	17957	21	-	22.46	-	19.49
High	2996	3.5	-	3.82	-	3.18
Combined absence	85259	100	-	43420	-	41839
Low	49767	58.37	-	59.25	-	57.46
Moderate	34331	40.27	-	39.67	-	40.89
High	1161	1.36	-	1.08	-	1.65
Physical abuse	80344	100	1.07	41613	1.05	38731
Emotional abuse	81831	100	1.19	42284	1.09	39547
Neglect	83728	100	-	43148	-	40580
Never	81036	96.78	-	41843	-	39193
Once or twice in my life	1809	2.16	-	995	-	814
Several times in my life	883	1.05	-	310	-	573
Symptoms of anxiety	84074	100	12.64	42839	9.4	41235
Symptoms of depression	84110	100	9.22	42969	7.43	41141

As seen in the table, absence due to truancy – both high and moderate – was more common among boys than girls. Both moderate and high absence due to illness was in turn more common among girls. Mean levels for physical and emotional abuse were both low, with a mean of approximately 1 on a scale ranging from 1.05 (boys on physical abuse) to 1.19 (girls on emotional abuse). Regarding neglect, the difference in frequency between having experienced neglect once or twice and several times, was big for both girls and boys. The mean levels for both symptoms of anxiety and depressive symptoms were somewhat higher for girls than for boys.

### The association between maltreatment, internalizing symptoms and school attendance problems

Associations between both the descriptive and explanatory variables, and school non-attendance, was examined using cumulative logistic regression analysis. The purpose was to find out whether the participants reported gender, parent educational level, depressive symptoms, symptoms of anxiety and experiences of emotional abuse, physical abuse or neglect predicted absence due to truancy and to illness. The results of the regression analysis are displayed in Table 4.

**Table 4**

*Results of the cumulative regression analysis*

Included variables	Absence due to truancy	Absence due to illness
--------------------	------------------------	------------------------

	(n=69733)		(n=69742)	
	OR	WALD CI	OR	WALD CI
Gender				
Girl	1.00		1.00	
Boy	1.92	1.85-2.0	1.21	1.17-1.26
Parent educational level				
High school or vocational school	1.00		1.00	
Vocational studies in addition to high school or vocational school	0.83	0.79-0.87	0.95	0.91-1.0
Elementary school or other comparable education	1.22	1.13-1.32	1.13	1.03-1.23
University, university of applied sciences or other college-studies	0.67	0.64-0.7	0.84	0.81-0.90
Physical abuse	1.37	1.23-1.52	1.06	0.95-1.18
Emotional abuse	1.99	1.83-2.16	1.40	1.28-1.52
Neglect				
Never	1.00		1.00	
Once or twice in my life	1.41	0.98-1.24	0.98	0.80-1.24
Several times in my life	1.34	1.12-1.60	1.23	1.03-1.47
Symptoms of anxiety	1.04	1.04-1.05	1.08	1.07-1.08
Symptoms of depression	1.08	1.07-1.09	1.06	1.06-1.07

The analysis demonstrated that all types of maltreatment – physical abuse, emotional abuse and neglect – significantly predicted both absence due to truancy and absence due to illness. A slightly stronger connection was observed between emotional and physical abuse and absence due to truancy, compared to absence due to illness. Physical abuse clearly predicted absence due to truancy (OR =1.37) and had a weak connection with absence due to illness as well (OR=1.06). Emotional abuse significantly predicted absence due to illness (OR=1.49) and out of all variables used, the strongest predictive power was in the association between emotional abuse and absence due to truancy (OR=1.99).

The internalizing variables were also found to slightly increase the odds of both types of absence. Symptoms of anxiety had a somewhat stronger connection with absence due to illness (OR= 1.08) than with absence due to truancy (OR=1.04), while depressive symptoms in turn had a marginally stronger connection with absence due to truancy (OR=1.08) than absence due to illness (OR=1.07).

Gender boy increased the odds for both absence due to truancy (OR=1.92) and absence due to illness (OR=1.21). Regarding parent educational level, the results showed that

high parent education level decreased the risk for both absence due to truancy and absence due to illness.

### The mediating effect of internalizing symptoms on the association between maltreatment (physical and emotional abuse) and school attendance problems

The path analysis, or mediation analysis, incorporates both direct and indirect effects between experiences of maltreatment and absence from school. This further implies that except for direct associations between physical abuse and absence, and emotional abuse and absence, the model also displays indirect associations between the different types of abuse on absence through the mediating variables, i.e. symptoms of anxiety and depressive symptoms. Figure 1 shows the mediation model, its coefficients and standard errors.

**Figure 1**

*Model of direct and indirect paths between variables.*

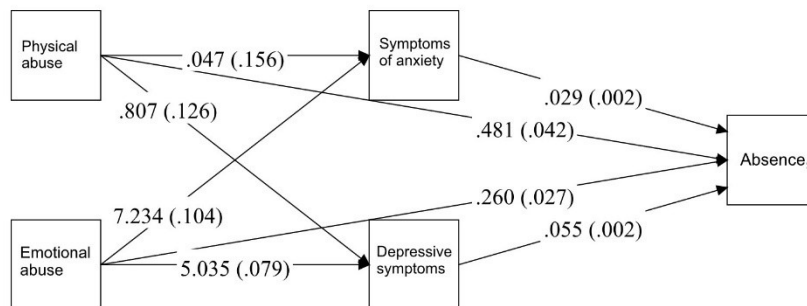


Table 5 shows standardized and non-standardized values of the effects of the variables included in the analysis.

**Table 5**

*Table of regression coefficient values of the path model*

Effects	b	$\beta$	SE	P
Direct effects				

Physical abuse				
..on absence	0.481	0.084	0.042	< .001
..on symptoms of anxiety	0.047	0.002	0.156	0.764
..on depressive symptoms	0.807	0.048	0.126	< .001
Emotional abuse				
..on absence	0.260	0.062	0.027	< .001
..on symptoms of anxiety	7.234	0.412	0.104	< .001
..on depressive symptoms	5.035	0.406	0.079	< .001
Indirect effects				
Physical abuse on absence				
..via symptoms of anxiety	0.001	0.000	0.005	0.764
..via depressive symptoms	0.044	0.008	0.007	< .001
Emotional abuse on absence				
..via symptoms of anxiety	0.213	0.051	0.012	< .001
..via depressive symptoms	0.275	0.065	0.013	< .001

As seen in Table 5, all direct paths except for the one from physical abuse to symptoms of anxiety were found to be significant. The direct effect of physical abuse on symptoms of anxiety was, in other words, not found to be substantial in this sample. Physical abuse still had a significant, although small, direct effect on depressive symptoms and a slightly larger, although still small, effect on absence. The direct effect of physical abuse on absence was the strongest of all the direct effects of physical abuse and was also stronger than the direct effect of emotional abuse on absence. On the contrary, emotional abuse had a stronger direct effect on depressive symptoms and symptoms of anxiety, which was also the strongest effect in the whole analysis.

Table 5 also displays the strength of the indirect paths between both types of abuse on absence via both types of internalizing symptoms – i.e., the mediation. The analysis showed a significant mediation effect, or indirect effect, of emotional abuse on absence via both types of internalizing symptoms and of physical abuse on absence via depressive symptoms. Specifically, the indirect paths from emotional abuse via symptoms of anxiety and depressive symptoms to absence, were both significant. The indirect effect of physical abuse on absence via depressive symptoms was weak but still significant, but an indirect effect of symptoms of anxiety on the association between physical abuse and absence was not found. R-square values of the analysis are displayed in Table 6.

**Table 6**

*R-square values for observed variables.*

R-square	Estimate	S.E	Est./S.E	P-value
Abuse and internalizing on absence	0.12	0.00	33.11	0.00
Abuse on symptoms of anxiety	0.17	0.00	44.88	0.00
Abuse on depressive symptoms	0.19	0.00	44.05	0.00

The model fit statistics also estimated effects sizes of the model. As seen in the table, the whole model explained 12 % of the variance in absence. Having experienced physical or emotional abuse explained 17 % of the variance in anxiety scores, and 19 % of the variance in depression scores.

## Discussion

In accordance with previous research, the current study established a connection between maltreatment and school attendance problems. Specifically, experiences of physical abuse, emotional abuse and neglect were all found to increase both absence due to truancy and absence due to illness in Finnish adolescents in the 8th and 9th grade. The study also found support for a mediation effect of internalizing symptoms, namely that emotional abuse had an effect on school attendance via the mediation of both symptoms of anxiety and depressive symptoms, and physical abuse had an effect on school attendance via depressive symptoms. These results are pioneering in this area, seeing as internalizing symptoms had not before this been investigated as a mediator in the relationship between maltreatment and school attendance problems. Below, the results will be described and discussed more in detail.

### **The association between maltreatment, internalizing symptoms and school attendance problems**

The results of the regression analysis showed all three types of maltreatment to be significantly associated with school attendance problems. In other words, experiences of physical abuse, emotional abuse and neglect all increased the likelihood of the SAPs in the adolescent. A stronger association between emotional abuse and absence due to truancy compared to illness was also discovered. The relationship between physical abuse and absence due to truancy was likewise stronger compared to absence due to illness, but the



difference was bigger for emotional abuse and emotional abuse also had an overall stronger – albeit only slightly – effect on both types on absence than physical abuse.

In plain language, this means that youth who are emotionally and physically abused at home avoid school more frequently than the non-maltreated youth. These adolescents do so both illegitimately and legitimately, i.e. both truanting and in the form of sickness absence. These results have not, to my knowledge, been established in a sample of this size before. Nor have the mechanisms behind this relationship been mapped systematically before this, which is why – although other scholars have investigated this subject (see Armfield et al., for more) – there is no clear answer as to how or why maltreatment increases absenteeism. As previously mentioned, it can be assumed that to some extent this connection is due to direct results of abuse – i.e. the adolescent being acutely unable to attend school because of injuries caused by the abuse. Indirect reasons might likewise be a plausible explanation, for example, that the experienced abuse causes the adolescent to develop internalizing symptoms that, in turn, render her or him incapable of going to school. Regardless, what is perhaps relevant to note here is that when Mielityinen et al. investigated school engagement among maltreated adolescents in the same sample (2021), they found maltreatment to increase functional engagement in school. They further describe how the school environment can offer sort of a refuge for maltreated children and adolescents and increase immersion in school work (Mielityinen et al., 2021). When these results are considered together, it becomes clear that while some maltreated adolescents can be found to engage in school work and participate in school activities (which, in turn, have the potential to promote resilience), a significant number of these maltreated adolescents do not or are not able to perceive school as a haven, since they are not in school to begin with.

Further, this study did not find support for the notion of neglect being the strongest predictor of SAPs, which is interesting considering this connection has been noted before (Armfield et al., 2020). The reasons behind this finding could be many, for instance, it could be due to a difference in the operationalization of neglect. The question used to form the variable neglect in the current study, which is the question in the School Health Promotion study that most closely resembles the notion of neglect, leaves room for interpretation. It is, for example, plausible to consider that some respondents might have interpreted it literally, in which case the question would have caught reports of occasional forgetfulness of parents and not the seriously neglected population.

As in prior research (see for example Hancock et al., 2021, for more), family socioeconomic status – here operationalized as parent educational level – also predicted school attendance problems. As to why this connection persists, this study previously referred to how Hancock et al. (2021) have reasoned regarding contextual risk factors and this reasoning is again relevant here. Parents' educational level likely affects school attendance problems indirectly via, for example, financial difficulties concretely obstructing attendance, or perhaps via rendering the child generally vulnerable as a result of an inadequate upbringing environment. Gender was also observed to predict SAPs, so that respondents who reported their official gender to be boy exhibited more frequent absences than those who reported their official gender to be girl. The results on the effect of gender on SAPs have varied in previous research, displaying equal distribution in some studies and higher absenteeism rates for both girls and boys depending on age and racial background of the studied sample in other (Havik et al., 2015). Because of this variation in previous results, conclusions on why this sample showed increased absence in boys can be considered speculative.

Finally, also internalizing symptoms – both symptoms of anxiety and depressive symptoms – were found to increase the incidence of absence in the current sample. There are, as discussed earlier, previous findings supporting this relationship as well as scholars questioning the directionality (Gubbels et al., 2019; Hancock et al., 2021). These results were thereby important not only for supporting further analysis in the current study, but also in general as additional data adding to the knowledge on the complex and bidirectional relationship between internalizing symptoms and school attendance problems.

Taken together, this study provides evidence of different types of maltreatment differing in how large their general impact on absence is, as well as of different types of maltreatment having different effects on different types of absence. Further, the study proceeded to try to disentangle the mechanism behind how experiences of maltreatment lead to absence by incorporation internalizing symptoms via a mediation analysis.

### **Internalizing symptoms as a mediator in the association between maltreatment (physical and emotional abuse) and school attendance problems**

To begin with, in the second part of the analysis (the path analysis), support was found for the previously established notion that the maltreated adolescents experience more

internalizing symptoms than the non-maltreated. As in the regression analysis, the path analysis also conveyed a connection between internalizing symptoms and absence. In other words, the analysis firstly noted a connection between the independent variable and the mediating variable, and between the mediating variable and the dependent variable.

The main results of the path analysis were, however, that the current study found support for a mediation effect of internalizing symptoms on the connection between maltreatment and school attendance problems. This implies that, for a part of the maltreated absentees in this sample, internalizing symptoms explained their increased absence. Additionally, the indirect effects of emotional abuse via both types of internalizing symptoms were substantially stronger than the effect of physical abuse on SAPs via depressive symptoms. As described earlier, there is reason to suspect that this reflects how emotional abuse more frequently leads to internalizing symptoms than physical abuse. Based on pre-existing evidence, we know that emotional abuse has a particularly strong connection with adolescent internalizing symptoms (Cohen & Thakur, 2021) and that depression and anxiety are the most prevalent emotional problems in absentees (González et al., 2018), but up until now the perhaps quite intuitive connection between these two has not been established. These results thereby show that maltreated absentees constitute a subgroup amongst not only absentees in general but also amongst the absentees with internalizing symptoms, which can have important implications for future intervention planning. To illustrate with an example, an adolescent skipping school because of anxiety due to an abusive parent might not benefit from the same interventions as someone skipping school because of anxiety due to socially evaluative situations in school. The results are hereby important in promoting further research into the practical needs of this group.

Lastly, although the indirect effect of physical abuse on SAPs via depressive symptoms was weak, the direct effect of physical abuse on depressive symptoms was significant. Even though a comparison to the effect of externalizing symptoms is not possible in the current study, this can still be considered noteworthy, since physical abuse is generally associated primarily with externalizing problems (Zhou & Zhen, 2022). And, to return to the beginning of this subchapter – although an increased level of internalizing symptoms amongst maltreated adolescent compared to non-maltreated are not news in the academic literature, that this association is found in a sample as large as this is relevant not only for the

absenteeism intervention development but also on a more general level. This further highlights how the maltreated adolescents are exposed to several risk factors.

To the following, some relevant considerations on the studied subjects are discussed.

### **General considerations on the complexity of the studied subjects**

Beyond the limitations described in the following section and as previously stated, the three main variables in the current study (school attendance problems, maltreatment and mental health problems) are all complex and multi-faceted subjects. Even though these subjects were found to be connected in this sample, this complexity needs to be considered when viewing the results. As noted before, both school attendance problems and maltreatment are found in both ends of the continuum as both risk factors and outcomes and when also incorporating mental health problems into the connection, the possible pathways and directions of effect are many. Mental health problems are overall found to co-variate with risk factors relating both to the school- and family context (Hancock et al., 2021), easily creating multi-risk contexts where entangling the chain of effects is difficult.

Some aspects of specifically maltreatment are also relevant to discuss. Firstly, there is support for both a cumulative understanding of adversity as well as some scholars advocating for different effect of different subtypes of adversity, the time of occurrence of the adversity and the stability of adversity over time on outcome (Cohen & Thakur, 2021; Maclean et al., 2020). In the current study, the effects of three different subtypes of adversity were investigated, but the questions in the survey might not have been comprehensive enough to capture everyone's experience, this was not an exhaustive account of all subtypes of adversity and a comparison to a cumulative effect was not done. Also, considering the effects on development and wellbeing are considered to vary to some degree depending on when the maltreatment occurs during development (Cohen & Thakur, 2021; Russotti et al., 2021), this might have affected the results. In the current study, respondents are inquired to report maltreatment that has occurred during the last 12 months. Hence the possibility for assuming anything about the respondents potential experiences of maltreatment during childhood is excluded.

On a related note, the SHP asks about internalizing symptoms experienced by the youth in the present moment or during the last two weeks. Consequently, assumptions regarding whether the internalizing symptoms have existed previous to the maltreatment and absence can't be made. The interplay between development of internalizing symptoms and environment is also a complex matter and experienced adversities in life can either enhance pre-existing symptoms or trigger them to begin with. Another aspect of maltreatment that is not considered in the current study, is the one of resilience. Although parent educational level was incorporated – and higher parental education can be seen as a protective factor – the current study does not sufficiently take into account what role, if any, resilience might have in the relationship between maltreatment and school attendance problems. It thereby remains unclear which specific factors might have had a protective effect in preventing a history of maltreatment from expressing itself as absenteeism.

To sum up, and taking this complexity into account, this study yielded novel and important results of substantial effect in a large sample. Building on previous literature, maltreated, adolescent absentees can be considered an especially vulnerable group for several reasons; the risk for developing school attendance problems, the effect of maltreatment on both internalizing symptoms and SAPs, and the risk for developing mental health problems overall, have all been identified as unique in adolescence. Considering this, the results of the current study have important implications for future research.

### **Strengths and limitations**

Through the SHP, the current study gained access to the majority of an age group in Finland. A considerable strength of this study is, hence, its large sample and thereby robust statistical results. However, as discussed in the previous section, the interpretation of the results are affected by the complexity of the reality of the variables maltreatment, school attendance problems and mental health problems. A few other methodological limitations are described below.

Self-reported data on absenteeism in general raise a few questions about validity and reliability that need to be considered, previously discussed by Keppens among others (2019). The study of absenteeism based on self-report can overall be considered to be complicated by potential unreliability in the reported reason for absence; that is, which type of

absence the adolescent reports having (absence due to truancy or illness). Since absence due to truancy is an act associated with negative consequences, it is plausible to consider this a potential motivator for not stating the real reason for the absence. Further, as the type of absence is reported in retrospect, memory-bias might also be affecting the answers (Keppens et al., 2019).

Other aspects of reliability and validity possibly affecting the current study, are related to the practical circumstances of the data collection. Although the SHP is carried out as a part of the school day – and therefore isn't perhaps affected by the non-response bias as much as cross-sectional studies in general (Sedgwick, 2014) – participation is still voluntary. In addition – and this might be the most relevant limitation – the participating group might not be the most representable for the phenomenon that is the subject of interest. This study is specifically interested in the experiences of the absent adolescents, but the data is collected at school. As a result, there is reason to question the representability of the sample – a part of the target group, the absentees, are presumably not at school at the point of the collection of data.

Mediation analysis in general is also associated with a set of limitations. Agler et al. view mediation analysis from several angles, highlighting how, for instance, analysis of mediation has a potential to bias the interpretation of interference or associations (2017). Based on the views of Angler et al. (2017), what can be viewed as a strength in the current mediation model is that it builds on a significant connection between maltreatment and absence before it explores indirect pathways. Hence, what Agler et. al talks about as the risk of “*fishing for expectation*” in mediation analysis, is avoided here (2017).

One limitation also stems from inclusion adjustments in the sample. The current study only included official gender, i.e girl or boy, and has thus not captured the experiences of non-binary youth. This adjustment was based on practical reasons, since the survey only had the two official genders as answer alternatives. To enhance generalizability, an important task for future research will be to include the non-binary youth when investigating this subject.

Regarding mental health problems, it was here operationalized as the presence of internalizing symptoms, due to the salience of specifically internalizing symptoms in previous research on the associations between psychopathology and maltreatment as well as

psychopathology and absenteeism. That externalizing symptoms, or other symptoms indicating mental health problems, was not incorporated in the analysis limits the generalizability of the results. It remains to be investigated whether, if any, role for example externalizing symptoms have in the relationship between maltreatment and SAPs.

## **Conclusion**

The current study established a connection between physical abuse, emotional abuse and neglect, and both absence due to truancy and absence due to illness. Based on previous evidence, this connection could be expected but had up until now only been observed in a small number of studies and in smaller samples than the current one. The results of this study also conveyed support for a mediating effect of internalizing symptoms in the relationship between maltreatment and school attendance problems. Specifically, emotional abuse was found to have an effect on SAPs via symptoms of anxiety and depressive symptoms, and physical abuse via depressive symptoms. These effects had not been studied or established before and they are important in highlighting the maltreated, adolescent absentees as a vulnerable group, as well as encouraging further research efforts into the need of this group of absentees.

## Swedish summary

### **Misshandel, internaliserade symtom och deras samband med skolfrånvaro hos finska ungdomar**

Skolfrånvaro har konstaterats vara associerat med omfattande negativa konsekvenser för den normativa utvecklingen (Gubbels m.fl., 2019; Heyne m.fl., 2019). Misshandel är likväl ett ämne som konsekvent blivit kopplat till ett antal allvarliga negativa följder på lång sikt (Maclean m.fl., 2020; Russotti m.fl., 2021). Tidigare forskning har etablerat en koppling mellan skolfrånvaro och misshandel (Gubbels m.fl., 2019) men antalet studier som stöder detta samband är få. Tidigare studier har även visat att psykisk ohälsa är ofta förekommande hos den undergrupp av skolfrånvarande ungdomar som även har blivit utsatta för misshandel, jämfört med de som inte har blivit utsatta (Hagborg m.fl., 2018). Vidare har efterforskningar i en potentiell koppling mellan misshandel och skolfrånvaro som går via internaliserade symtom beskrivits som en viktig uppgift för kommande forskning (Hagborg m.fl., 2018).

### **Skolfrånvaro; terminologi, följder för utvecklingen och riskfaktorer**

Skolfrånvaro är ett mångfacetterat koncept, både med avsikt på hur problemen tar sig uttryck och hur terminologin används såväl i litteratur som i praktiska sammanhang (Heyne m.fl., 2019). Heyne m.fl. (2019) har i ett försök att reda ut den inkonsekventa terminologin beskrivit hur konceptualiseringen av skolfrånvaro fundamentalt bygger på en åtskillnad mellan huruvida frånvaron är problematisk eller inte. Författarna konstaterar att det råder en växande konsensus kring Kearneys definition av skolfrånvaro, som vidhåller att icke-problematisk skolfrånvaro är frånvaro som både de vuxna hemma och de vuxna i skolan anser vara legitim och som inte anses vara skadlig för barnet eller ungdomen (Heyne m.fl., 2019). Hit hör till exempel sjukfrånvaro. Problematisk frånvaro definieras i sin tur utifrån tre kriterier: frånvaro som överskrider 25 % av skoltiden under de senaste två veckorna, försvårande av familjens rutiner på grund av frånvaron eller frånvaro under minst 10 dagar under vilken som helst given femtondagarsperiod under det pågående läsåret. Problematisk frånvaro omfattar t.ex. skolk. I den här studien kommer termen skolfrånvaro användas både vid allmän hänvisning till fenomenet och vid återgivning av tidigare studier inom ämnet. Denna studie kan däremot inte garantera att här hänvisade studier använder termen på samma sätt, eftersom det råder en brist på gemensam förståelse av vilka termer som syftar på problematisk jämfört med icke-problematisk frånvaro.



Det råder däremot större konsensus kring de skadliga effekterna av skolfrånvaro, av vilka några av de mest framträdande har visats vara psykisk ohälsa, försämrad akademisk prestation, avhopp från skolan, brottslighet och missbruk (Gubbels m.fl., 2019; Hagborg m.fl., 2018; Heyne m.fl., 2019). Etiologin bakom sjukfrånvaro anses i sin tur omfatta flera faktorer, inklusive riskfaktorer som bl.a. internaliserade symtom hos barnet, låg socioekonomisk status, föräldrarnas psykiatriska problem, antisociala tendenser i vänkretsen och brister i skolans kapacitet att möta elevernas behov (Gubbels m.fl., 2019; Hagborg m.fl., 2018).

### **Misshandel och skolfrånvaro**

Barnmisshandel används som ett paraplybegrepp som inkluderar både fysisk, sexuell och emotionell misshandel samt bristande omsorg (Cui m.fl., 2020; Nasvytienė m.fl., 2012). Det råder väldigt lite oenighet om de potentiella negativa konsekvenserna av misshandel, vilka bland annat inkluderar internaliserade symtom, försämrad kognitiv förmåga och ökad skolfrånvaro (Hagborg m.fl., 2018; Maclean m.fl., 2020; Rouse & Fantuzzo, 2009; Russotti m.fl., 2021; Schneider, 2020; Shonk & Cicchetti, 2001; Slade & Wissow, 2007;). Misshandel har även funnits vara anknytet till ökad skolfrånvaro (Armfield m.fl., 2020), men här saknas ännu en solid evidensbas. Angående mekanismerna bakom hur misshandel påverkar skolfrånvaro är det frågan om ett komplext förhållande – misshandel har en tendens att förekomma parallellt med andra svårigheter, vilket gör det svårt att reda ut vilken den primära eller direkta orsaken till frånvaro är (Armfield m.fl., 2020; Hancock m.fl., 2021; Maclean m.fl., 2020). Generellt pekar litteraturen mot att emotionell misshandel och bristande omsorg skulle vara starkast anknytet till internaliserade symtom, medan fysisk misshandel anses ha en starkare koppling till externaliserade symtom och bristande omsorg har funnits ha en något starkare prediktiv effekt på skolfrånvaro än de andra typerna av misshandel (Armfield m.fl., 2020; Augusti m.fl., 2018; Cohen & Thakur, 2021; Zhou & Zhen, 2022).

### **Psykisk ohälsa som en potentiell mediator i sambandet mellan misshandel och skolfrånvaro**

Det finns belägg för psykisk ohälsa hos både barn och unga som har blivit utsatta för misshandel och hos de med förhöjd skolfrånvaro. Specifikt internaliserade problem i form av depression och ångest har visats vara de mest frekvent förekommande emotionella problemen hos barn och unga med skolfrånvaro (Gonzálvez m.fl., 2018). Därtill stöder också en mängd forskning sambandet mellan misshandel och destruktiva effekter på den psykiska

hälsan inklusive internaliserade symtom (Cohen & Thakur, 2021; Romano m.fl., 2015; Russotti m.fl., 2021). Den akademiska diskursen som förts kring detta gör gällande att sambanden mellan dessa fenomen behöver redas ut; bland annat har skolfrånvaro konstaterats vara en riskfaktor för utveckling av psykopatologi samtidigt som underliggande psykopatologi har visats föregå skolfrånvaro (Gubbels m.fl., 2019; Hagborg m.fl., 2018). Misshandel, psykisk ohälsa och skolfrånvaro är därmed i flera avseenden nära besläktade och riktningarna för de inbördes sambanden mellan dessa är många. Trots att andra akademiker har närmat sig ämnet har inga studier hittills, till min kännedom, etablerat varken psykisk ohälsa i allmänhet eller internaliserade symtom i synnerhet som en medierande faktor i sambandet mellan misshandel och skolfrånvaro. I likhet med hur Hancock m.fl. (2021) beskriver kontextuella riskfaktorer som indirekt associerade med skolfrånvaro via en medierande faktor, är det rimligt att anta att misshandel kunde öka risken för skolfrånvaro via dess inverkan på den mentala hälsan.

### **Tonåren som en speciellt sårbar tid gällande sambandet mellan misshandel och skolfrånvaro**

Skolfrånvaro har visats öka med ålder och tonåren har identifierats som en tidsperiod då skolfrånvaro börjar uppstå hos misshandlade ungdomar, då effekterna av misshandel generellt förvärras och då individen är speciellt sårbar för psykisk ohälsa (Gubbels m.fl., 2019; Hagborg m.fl., 2018; Wadman m.fl., 2020). Bland annat dessa fynd gör gällande att tonåren kan vara en känslig period för skolfrånvaro hos misshandlade ungdomar och att det kan vara särskilt relevant att undersöka sambandet mellan misshandel och skolfrånvaro i just denna åldersgrupp.

### **Syfte och forskningsfrågor**

Målet med den aktuella studien var att undersöka möjliga samband mellan misshandel och skolfrånvaro hos finska ungdomar i åttonde och nionde klass. I studien undersöktes också huruvida detta samband förklaras eller medieras av ungdomarnas psykiska ohälsa, här operationaliserat som förekomsten av internaliserade symtom. Som den ovanstående litteraturoversikten har belyst är studiet av förhållandet mellan misshandel och skolfrånvaro sannolikt komplext. De båda fenomenen har hur som helst funnits vara sammankopplade, liksom misshandel har funnits predicera psykisk ohälsa och psykisk ohälsa har bevisats vara en riskfaktor för skolfrånvaro. Utöver detta finns även belägg för att just tonåren är en speciellt sårbar tidsperiod när det kommer till dessa fenomen och sambandet

mellan dem. Trots detta är forskningen som konstaterat bristfällig inom detta område och därför bygger denna studie på fyra explorativa forskningsfrågor istället för att ställa en hypotes. Genom dessa forskningsfrågor är avsikten med studien att belysa mekanismerna bakom dessa samband. Forskningsfrågorna lyder enligt följande:

1. Finns det ett samband mellan självrapporterade erfarenheter av fysisk misshandel av föräldrar eller vårdnadshavare, och skolfrånvaro, hos finländska ungdomar i åttonde och nionde klass?
2. Finns det ett samband mellan självrapporterade erfarenheter av emotionell misshandel av föräldrar eller vårdnadshavare, och skolfrånvaro, hos finländska ungdomar i åttonde och nionde klass?
3. Finns det ett samband mellan självrapporterade erfarenheter av bristande omsorg av föräldrar eller vårdnadshavare, och skolfrånvaro, hos finländska ungdomar i åttonde och nionde klass?
4. Hur förklarar självrapporterad förekomst av internaliserade symtom sambandet mellan de olika typerna av misshandel och olika formerna av skolfrånvaro?

### **Metod**

Datainsamlingen för denna studie gjordes via Hälsa i skolan-enkäten, som administreras av det finska institutet för hälsa och välfärd, under vårterminen 2019 (THL, 2022). Enkäten från detta år besvarades av 89 502 finländska ungdomar i åttonde och nionde klass, vilket ger det ursprungliga datamaterialet en täckning på 75 % i den undersökta åldersgruppen (THL, 2022). En del begräsningar av det här materialet gjordes av Institutet för hälsa och välfärd (för mera information om detta, se THL, 2022) och likaså gjordes även en del begräsningar specifikt för denna studie, eftersom endast informanter i åldern 13-17 år har inkluderats. Åldersmedeltalet i denna studie är således 15.33, standardavvikelse 0.62.

Studiens samtliga variabler är konstruerade utgående ifrån frågor ur Hälsa i skolan-enkäten. De deskriptiva variablerna var kön, årskurs och föräldrarnas utbildningsnivå. Misshandel operationaliserades här som tre kategorier: fysisk misshandel, emotionell misshandel och bristande omsorg. Variabeln för bristande omsorg inkluderades dock inte i medieringsanalysen. Psykisk ohälsa undersöktes här som förekomst av internaliserade symtom – d.v.s., den ungas självrapporterade förekomst av depressiva- eller ångestsymtom –

och de väletablerade skalorna GAD-7 och BDI-II har använts för detta (Löwe m.fl., 2008; Wang & Gorenstein, 2013).

Vidare gjordes en faktoranalys för att skapa summavariabler av de förklarande variablerna. Faktoranalysen genererade fem faktorer med egenvärde  $>1$  och samtliga av dessa faktorer extraherades: en faktor för fysisk misshandel, en för emotionell misshandel, en för bristande omsorg, en för depressiva symtom och en för ångestsymtom. Faktorladdningarna sträckte sig från -0.02 till 0.78 för fysisk misshandel, 0.04 till 0.79 för emotionell misshandel, 0.05 till 0.65 för bristande omsorg, -0.00 till 0.83 för ångestsymtom och 0.02 till 0.73 för depression. Cronbachs alfa-värden för faktorerna var enligt följande: 0.91 för faktorn för fysisk misshandel, 0.85 för emotionell misshandel, 0.88 för depressiva symtom och 0.92 för ångest.

Skolfrånvaro undersöktes genom två variabler, skolfrånvaro i form av skolk och sjukfrånvaro. Utifrån enkätens struktur och med syftet att skapa kategoriska variabler kodades svaren på frågorna om frånvaro in i tre kategorier, en kategori för låg, moderat respektive hög frånvaro för både frånvaro i form av skolk och sjukfrånvaro. I medieringsanalysen användes däremot en kombinerad frånvarovariabel som kombinerar frånvaro i form av både skolk och sjukfrånvaro.

Medieringsanalysen eller stiganalysen gjordes med programmet Mplus 8 (Muthén & Muthén, 2017) och utfördes av statistikern Janne Engblom. I analysen etablerades först kopplingar mellan de två predicerande variablerna, utkomstvariabeln och de medierna variablerna, varefter direkta och indirekta effekter uppmättes inom modellen. Samtliga andra analyser genomfördes med mjukvaran SAS 9.3.

## **Resultat**

### **Deskriptiv statistik**

Utav hela det inkluderade samplet ( $N=86\,862$ ) gick 44 167 deltagare i åttonde klass och 42 435 i nionde. Både hög och moderat frånvaro i form av skolk var mer frekvent hos pojkar än flickor, medan sjukfrånvaro uppvisade motsatt fördelning. Medeltalen för fysisk respektive emotionell misshandel var båda låga, med det högsta värdet på 1.19 för emotionell misshandel hos flickor. Gällande bristande omsorg var det för båda könen en stor skillnad mellan att ha upplevt bristande omsorg en eller två gånger jämfört med att ha upplevt det flera

gångar. Medeltalen för depressiva symtom och ångestsymtom var något högre för flickor jämfört med pojkar.

### **Sambandet mellan misshandel, internaliserade symtom och skolfrånvaro**

Sambanden mellan både de deskriptiva och förklarande variablerna, och skolfrånvaro, undersöktes via kumulativ regressionsanalys. Analysen visade att alla tre typer av misshandel innebar en signifikant ökning av både skolfrånvaro i form av skolk och sjukfrånvaro, med en något starkare prediktiv effekt av både fysisk (OR =1.37) och emotionell misshandel (OR=1.99) på skolfrånvaro i form av skolk jämfört med sjukfrånvaro. Även båda typerna av internaliserade symtom ökade här oddsen för båda formerna av frånvaro. Sambandet var något starkare mellan ångestsymtom och sjukfrånvaro (OR= 1.08), jämfört med frånvaro i form av skolk, och tvärtom mellan depressiva symtom och frånvaro i form av skolk (OR=1.08) jämfört med sjukfrånvaro. Därtill var risken för skolfrånvaro i form av skolk (OR=1.92) och sjukfrånvaro (OR=1.21) högre för pojkar än för flickor. Hög utbildningsnivå hos föräldrarna minskade risken för båda sorternas frånvaro.

### **Den medierande effekten av internaliserade symtom i sambanden mellan misshandel (fysisk och emotionell) och skolfrånvaro**

Förutom direkta kopplingar mellan både fysisk och emotionell misshandel och skolfrånvaro, omfattar medieringsanalysen eller stiganalysen även indirekta kopplingar mellan misshandelsvariablerna och skolfrånvaro via depressiva symtom och ångestsymtom. Resultaten från denna analys avslöjade att alla direkta kopplingar förutom den från fysisk misshandel med ångestsymtom var signifikanta – med andra ord hade emotionell misshandel förutom en direkt koppling till skolfrånvaro ( $\beta=0.062$ ) också en direkt koppling till både ångestsymtom ( $\beta=0.412$ ) och depressiva symtom ( $\beta=0.406$ ). Vidare hade fysisk misshandel en direkt koppling till skolfrånvaro ( $\beta=0.084$ ) och depressiva symtom ( $\beta=0.048$ ). Modellen visade även på en signifikant medieringseffekt av båda typerna av internaliserade symtom i relationen mellan emotionell misshandel och skolfrånvaro ( $\beta=0.052$  för ångestsymtom,  $\beta=0.065$  för depressiva symtom), samt av depressiva symtom i relationen mellan fysisk misshandel och skolfrånvaro ( $\beta=0.008$ ).

Hela modellen förklarade 12 % av den totala variationen i skolfrånvaro och erfarenheter av fysisk och emotionell misshandel förklarade 17 % av variationen i ångestsymtom samt 19 % av variationen i depressiva symtom.

## **Diskussion**

I enlighet med tidigare forskning etablerades, i det aktuella samplet av finländska ungdomar i åttonde och nionde klass, en predicerande effekt av alla tre typer av misshandel (fysisk misshandel, emotionell misshandel och bristande omsorg) på båda formerna av skolfrånvaro (skolfrånvaro i form av skolk och sjukfrånvaro). Detta samband har inte tidigare etablerats i ett så här stort sampel. Dessutom visade studien på att olika typer av misshandel varierar i sin generella effekt på skolfrånvaro och vidare att olika typer av misshandel även har olika effekt på olika former av skolfrånvaro. Studien fann också stöd för en medierande effekt av internaliserade symtom, vilket innebär att emotionell misshandel hade en effekt på skolfrånvaro via depressiva symtom och ångestsymtom och att fysisk misshandel hade en effekt på skolfrånvaro via depressiva symtom. Dessa resultat är de första av sitt slag och kan komma att ha en stor betydelse för kommande forskning och planering av interventioner. I den här studien framkommer därmed att det finns en undergrupp av skolfrånvarande ungdomar som har blivit utsatta för misshandel hemma och som är frånvarande på grund av sina internaliserade symtom snarare än direkta effekter av misshandeln, vilket understryker ett sannolikt behov av annorlunda interventioner än de ungdomar som är frånvarande på grund av exempelvis social ångest.

De undersökta fenomenens komplexitet medför att resultaten bör tolkas i ljuset av detta. Till exempel har den av vissa akademiker betonade kumulativa effekten av misshandel inte undersökts i den aktuella studien, utan endast effekten av de åtskilda typerna av misshandel (Cohen & Thakur, 2021; Maclean m.fl., 2020). Vidare begränsade enkäten datamaterialet till en viss mån, av vilken orsak det är svårt att fastställa bl.a. det tidsmässiga förhållandet mellan de internaliserade symtomen och när misshandeln inträffade. Då man tar i beaktande dessa och en del andra komplexa aspekter, har denna studie sammanfattningsvis ändå funnit signifikanta effekter i ett stort sampel, inom frågor som har viktig betydelse för kommande forskning.

## **Styrkor och begränsningar**

Genom Hälsa i skolan-enkäten fick denna studie som konstaterat tillgång till majoriteten av en åldersgrupp, vilket ger studien en klar styrka i form av ett brett sampel och robusta statistiska resultat. En relevant begränsning är dock att eftersom Hälsa i skolan-enkäten fylls i fysiskt i skolan, är det följaktligen rimligt att anta att en del av målgruppen som var av intresse i denna studie – d.v.s. de skolfrånvarande ungdomarna – inte var på plats då

enkäten fylldes i. Utöver det är självrapporterad skolfrånvaro överlag associerat med bland annat potential för förvrängning av resultat i och med de negativa konsekvenserna relaterade till skolfrånvaro (Keppens m.fl., 2019). Medieringsanalys förknippas också med en del begränsningar (se Agler m.fl., 2017, för mera) och därtill kan också begränsningarna av samplet samt operationaliseringen av psykisk ohälsa ha påverkat resultaten.

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## PRESSMEDDELANDE

### **Misshandel, internaliserade symtom och deras samband med skolfrånvaro hos finska ungdomar.**

Pro-gradu avhandling i psykologi

Fakulteten för humaniora, psykologi och teologi, Åbo Akademi

En pro-gradu avhandling i psykologi vid Åbo Akademi fann att ungdomar i klass 8 och 9 som utsatts för misshandel och bristande omsorg uppvisade ökad skolfrånvaro, både i form av skolk och sjukfrånvaro. Dessutom förklarades detta samband delvis av internaliserade symtom, här undersökt som depressiva symtom och ångestsymtom, så att hos en del av samplet ökade erfarenheter av att ha blivit misshandlad hemma mängden skolfrånvaro genom att först ge upphov till depressiva symtom och ångestsymtom. Således var det på grund av dessa symtom som ungdomarna stannade hemma från skolan. Bevisen för ett samband mellan misshandel och frånvaro i ett så här stort sampel är, oss veterligen, de första av sitt slag. Internaliserade symtom som en förklarande faktor i detta samband har såvitt vi känner till aldrig blivit undersökt tidigare och således har den medierande effekten aldrig konstaterats tidigare.

Studiens datamaterial samlades in av THL via Hälsa i Skolan-enkäten år 2019 i samtliga högstadier i Finland, vilket ger resultaten stor generaliserbarhet i Finland. Sammanlagt 86 862 informanternas svar inkluderades i denna studie, med en medelålder på 15.33 år. Studien använde sig av faktoranalys, regressionsanalys och stiganalys för statistisk analys av datamaterialet.

Avhandlingen skrevs av Jenny Langenskiöld under handledning av Katarina Alanko, PsM, PsD.

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