Suicidal ideation and self-harm among youth in Norway: Associations with verbal, physical and sexual abuse

Declaration: *This is a self-archive of post-print version of the article which was published first online 22 January 2014 at* ***Child & Family Social Work,*** *doi:10.1111/cfs.12126*

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Abstract

Using data from a national survey (N=6979) of young people in their last year in Norwegian secondary schools in 2007 (aged 18-19), this article explores the relationship between sexual abuse and experiences of violence amongst young people in Norway and their reporting of suicidal ideation and self-harm. This investigation includes three types of abuse experienced by young people: non-physical, physical and sexual. We investigate suicidal ideation and two types of self-harming behaviour: non-suicidal self-injury (NSSI) and suicidal self-injury (SSI). The analyses that are reported involve descriptive analysis, chi-square and t-tests, and logistic regression. The hypothesis that was confirmed by the analysis was that being subject to sexual abuse or other violence was associated with increased risk of self-harm. The hypothesis that was partially supported by the analysis was that violence experienced during childhood would have more effect on suicidal ideation and self-harm than violence experienced at a later age. Contrary to our expectations, it was found that peer bullying has a stronger effect on young people's suicidal ideation and self-harming behaviours than sexual abuse or physical violence. The implications of these findings for practitioners working with children and youth involve raising awareness about the long-term effects of verbal, physical, sexual, and witnessed abuse.

Keywords: adolescence, child abuse, sexual abuse, mental health

Introduction

It is estimated that 20 % of women and 5-10 % of men worldwide report having been sexually abused as children while 25-50 % of children report being physically abused (http://www.who.int/mediacentre/factsheets/fs150/en/index.html). In high income countries such as Australia, Canada, USA and UK, about 4-16 % of children are physically abused every year, one in ten are neglected or psychologically abused, and 5-10 % are exposed to penetrative sexual abuse; as many as three times this number are exposed to any type of sexual abuse (Gilbert et al. 2009). In five countries in the Baltic Sea region (Estonia, Lithuania, Norway, Poland and Sweden), 20-50 % of girls and 10-25 % of the boys at the age of 18 report having experienced some type of sexual abuse (Mossige et al. 2007; Kjellgren et al. 2009; Seto et al. 2010).

Exposure to sexual abuse and violence during childhood has not only short-term but also long-term effects on the physical, psychological and social development of the child into adulthood (Brodsky et al., 2001; Macmillan, 2001; Noll et al., 2003; Frederick and Goddard, 2008; Huang and Mossige, 2012). Child abuse is frequently reported as a risk factor for youth suicidal behaviour generally (Brodsky et al., 2001; Brodsky and Stanley, 2008) and suicidal ideation among men specifically (O'Leary and Gould, 2009). A strong association for instance, has been found between experiencing physical, psychological and/or sexual abuse as a child and later suicidal and self-harming behaviour among adolescents and young adults (Bridge et al., 2006; Salzinger et al., 2007; King and Merchant, 2008; Cash and Bridge, 2009; Miller et al., 2013).

At the same time, globally, suicide is the sixth leading cause of mortality of young people aged 5-14 and the second biggest cause of mortality among people aged 15-29 (the first

biggest cause of mortality is traffic accident for this age group). It is estimated that 71,000 adolescents die worldwide by suicide annually. However, the real number of young people dying by suicide is expected to be larger than the actual statistical record due to the tendency of 'under-reporting' (Pritchard and Hean, 2008). The number of youth suicides may be on the rise due to current economic crisis (Chang et al., 2013) as the rate of youth unemployment (ages 15-24) currently reaches 50% in several European countries (Eurostat 2013). Further, up to 40 times as many may self-harm with suicidal intent (UNICEF, 2011) constituting a huge burden for health systems globally.

Previous research has identified several risk factors associated with youth suicidal and self-harm behaviour, including: age, gender, experience of sexual abuse, interpersonal difficulties, low levels of support from family or peers, depressive symptoms, anxiety disorders, unemployment of parents, parental psychopathology, and parental suicidal history. Older adolescents aged 15 to 19 years have a higher rate of completed suicide than younger adolescents (Shain, 2007). Boys are more likely to complete suicide than girls. According to some international studies, boys aged 15-19 years have a suicide rate 2-6 times higher that of girls of the same age (Wasserman et al., 2004; Bridge et al., 2006; Cash and Bridge, 2009).

In Norway, boys aged 15-24 years have a suicide rate three times higher than girls, while girls are twice as likely to engage in self-harm and even more likely to experience suicidal ideation (Groholt et al., 1997; Wichstrøm and Rossow, 2002). The characteristics of adolescents' social interpersonal relations are found to be associated with youth suicidal and self-harming behaviour. Compared to non-suicidal youth, interpersonal difficulties such as difficulty making friends, frequent arguments with adult authority figures, social isolation from peers, and poor parent-child attachment are often found among suicidal youth (Maimon and Kuhl,

2008; Sheftall, 2010). Low family support and low peer support also predict severe suicidal and self-harming behaviour across ethnicity and gender (King and Merchant, 2008). Depressive symptoms and anxiety disorders are more pronounced among youth who engage in self-harm compared those who do not (Boden, Fergusson and Horwood, 2007). Finally, unemployment of parents (Christoffersen 1994), parental psychopathology and parental suicidal history are also identified as risk factors for youth suicidal and self-harming behaviour (Bostik and Everall, 2006; Brent and Melhem, 2008; Stepp et al., 2008).

Evidence from 21 countries that participated in the WHO World Mental Health Surveys demonstrates that internationally, there is a strong link between physical and/or sexual abuse during childhood and self-harm and/or suicidal thoughts occurring later in life (Bruffaerts et al., 2010; Stein et al., 2010). In addition, Perkins and Jones (, 2004) found that suicidal ideation was three times greater among adolescents with a history of physical abuse than among non-abused adolescents, and the risk of repeated self-harm is eight times greater for youths with a history of sexual abuse. Recent findings suggest that the age at which the sexual abuse occurs may also play a role: with abuse at an earlier age predicting a greater number of later suicidal self-harm episodes (Lopez-Gastroman et al., 2013).

Both longitudinal and cross-sectional studies have found that abuse and neglect are direct and independent predictors of suicidal and self-harming behaviour, even after controlling for depression, hopelessness, and other childhood adversities (King and Merchant, 2008). Research on completed suicide also indicates a clear link with childhood sexual abuse, with one U.K. study showing that male and female victims of childhood sexual abuse were respectively, 2.2 and 2.5 times likely to complete suicide than the general population (Pritchard and King, 2004). It is suggested that sexual abuse during childhood could be

specifically related to suicidal and self-harming behaviour because it is closely associated with feelings of shame and internal attributions of blame (Brodsky and Stanley, 2008). Its effect could be largely mediated by later occurring mental health problems and exposure to stressful life events, as reported by Fergusson et al. (2000) in a longitudinal study of children.

Nevertheless, there are several theoretical, as well as methodological, limitations in previous studies. The first limitation is the vague or inconsistent definition of suicidal and self-harming behaviour; it can refer to all acts of self-harm regardless of intent or outcome (Hawton et al., 2012). Second, in the exploration of the possible connections between independent variables of abuse and dependent variables of suicidal ideation, and self-harm, with or without suicidal intent, the impact of contextual variables as control variables or moderators is still an open question. While Yates, Carlson and Egeland (2008) report that child sexual abuse predicts recurrent self-injury, independent of risk factors such as socioeconomic status and family disruption, it has also been claimed that research "largely overlooks the associations between socioeconomic circumstances and patterns of self-injury" (Chandler et al., 2011, p. 102).

Using data from a national youth survey in Norway, this study aims to contribute research evidence and theoretical understanding of the relationship between experiences of abuse and suicidal ideation and self-harm behaviours among young people. In this study, we distinguish between suicidal ideation, non-suicidal self-injury (NSSI - self-harm with no suicidal intent) and self-harm with suicidal intent (SSI). We explore the distinctions between suicidal ideation and different kinds of self-harming behaviour (NSSI and SSI), concerning how they relate to different abusive experiences (non-physical, physical and sexual) and how they relate to circumstances in the various contexts where they take place. We also explore whether the age at which the abuse occurs and the type of abuse has an impact on suicidal ideation and self-

harm. This study tests three hypotheses based on previous theories and previous research using the Norwegian youth data: 1) being subject to sexual or other abuse will be associated with increased risk of suicidal ideation and self-harm among young people; 2) youth who reported physical or sexual abuse will be more likely to report suicidal ideation and self-harm than youth reporting verbal abuse; 3) abuse experienced before the age of 13 will have a stronger effect on suicidal ideation and self-harm among young people, than abuse experienced later in childhood.

Methods

The sample and demographics

Data used in this study are from the Norwegian LUVO National Youth Survey of 2007 (Mossige and Stefansen, 2007). The aim of the survey was to assess the prevalence of three different offences against children and youth: parental violence directed at the child, witnessing violence against parents, and experiencing sexual abuse (Mossige and Stefansen, 2007). Students from 67 randomly selected upper secondary schools participated in the survey during their last year of education. Research permission was first obtained from authorities at municipality level then at school level. Of the 9,085 students who were invited to participate in the study, 6,979 students participated in the initial data collection[1]. The response rate was 77% (Mossige and Stefansen, 2007). Participating students were given two hours during a school day to complete the questionnaire. Most of the respondents (92%) were aged 18-19 and 58 % were female

Verbal, physical, and sexual abuse

[1] To supplement some dropouts from the initial school sample, two additional schools were invited to participate in the survey; this resulted in a total of 7,033 completed questionnaires. Here, we present an analysis of data from 6,979 questionnaires, drawn from the initial data collection.

In this study, we categorise three types of offence against children: non-physical (severe verbal bullying or threat of violence), physical (slap with open hands, fists or being beaten up) and sexual (touching, exposing or sexual acts). The study includes two types of young victims (those who are abused and those who have witnessed abuse), and two types of perpetrators (parents and peers). Table 1 presents the statistical distributions of reported abuse. Non-physical abuse includes the sub-categories 1) verbal bullying and threats of violence from peers, 2) verbal bullying from parents before the age of 13, 3) verbal bullying from parents after the age of 13, 4) witnessing parents being verbally abused and 5) witnessing parents being physically abused. Physical abuse by peers includes the sub-categories 1) being injured by violence perpetrated by peers or by other young strangers, 2) physical abuse by parents before the age of 13, and 3) physical abuse by parents after the age of 13. It is coded as "0" if never experienced and "1" if at least one of the eight items has been experienced. This includes events from pushing and heavy shaking to slapping with an open hand and beating with fists or objects. For sexual abuse, we code "0" if never experienced and "1" if the respondent reported experiencing at least one of the 11 items relating to the question: "have you experienced any of the following forms of sexual encounter against your will before or after the age of 13?" The items include all kinds of events from "someone exposed his/her genitalia to you" to "someone raped you". However, although an incident such as "someone exposed his/her genitalia to you" might not be perceived by some people as 'abuse', we count this item in the measure of 'sexual abuse' since it is a response to the question "sexual encounter against your will".

TABLE 1 ABOUT HERE

Suicidal ideation and self-harming behaviour

Suicide ideation is measured by responses to a question: “have you thought of ending your life in the past week?” on a scale of “0”= never, “1”= a little, “2”= quite a lot and “3”= very much. Responses with a non-zero value are counted as having suicide ideation (n = 593, 8.5% of the total sample). Suicide attempt (n = 415, 5.9% of the total sample) is measured by non-zero responses to at least one of two questions: 1) “have you at any time tried to kill yourself?” and 2) “have you at any time ended up in hospital because you tried to kill yourself?” on a scale of “0”= never, “1”= once, “2”= more than once. Self-injury (n = 1260, 18.1% of the total sample) is measured by non-zero responses to at least one of three questions: 1) “have you at any time intentionally taken an overdose of pills or other medicine”, 2) “have you at any time tried to hurt yourself, e.g. cut yourself” and 3) “have you at any time ended up in hospital due to an injury you have done to yourself intentionally?” on a scale of “0”= never, “1”= once, “2”= more than once. While a majority of the young people (77.2%) did not report engaging in suicidal ideation or any of the two types of self-harm behaviour assessed, nearly a quarter of those surveyed reported engagement in at least one of the above.

Based on the statistical distribution of the sample, we group the young people of interest into three groups: 1) “suicidal self-injury (SSI)” includes five subgroups of 575 young people (8.2% of the sample) who report engaging in either suicide attempt only (n = 52), a combination of attempt and ideation (n = 22) and a combination of ideation and self-injury (n = 160); 2) “suicidal ideation” is the group of 256 (3.7%) young people who report having thought of ending their own lives during the past week and who have never engaged in any self-injury or suicidal attempt; 3) “non-suicidal self-injury” (NSSI) is the big group of 759 (10.9%) young people who report engaging in self-injury and have not reported suicidal ideation or a suicide attempt.

Psychological health

Psychological problems in the LUVO dataset are measured by a 12-item version of the Hopkins Symptom Checklist (SCL) (Wichstrøm, 1995) on a four-point scale from "0" as "not troubled at all", "1" as "a little troubled", "2" as "quite troubled", to "3" as "very troubled" indicating various symptoms of depression and anxiety. The variable of psychological problems is a mean score from sum of the 12 SCL items. Higher values indicate poorer psychological health.

Contextual variables

In this study, we look at several home background factors as the measures of contextual variables. "Parents live together" is measured by parents' civil status by combining categories of "married" and "cohabitating" as "1" or as "0". "Both parents with higher education" is measured by educational attainment at tertiary level by both parents as "1" or as "0". "Parents own the house they live in" is a dummy variable derived from a question concerned with whether parents own or rent the place they have lived in for the past five years. "Both parents work full time" is a dummy variable derived from a question asking if father and mother are working full time, part-time or not working. "Parents receive social welfare benefits" is measured by neither as "0" or as "1" if one of the parents in the past two years has received any of the following three types of social welfare payments: social assistance, disability insurance, or unemployment benefit. Home finance is a subjective measure by asking the correspondent "Has your family been in a good or bad financial situation in the past two years" on a six point scale (from "1"= a lot of ups and downs, "2"= financial difficulties all the time, "3"= financial difficulties most of the time, "4" = neither good or bad, "5"= financially comfortable most of time, "6" = financially comfortable all the time). "Financial

difficulties at home" is coded as "1" for responses 1-3 or as "0" for responses 4-6. In the LUVO survey, the respondent is asked to place the birth country of his/her father and mother among seven choices: Norway, another Nordic country, another European country, Asia, Africa, South America and North America/Oceania. 'Both parents are immigrants' is a combination of father's and mother's birth place in other countries than Norway and any other Nordic country.

Data analysis

Three aspects of the data analysis are reported: descriptive analysis, chi-square and t-tests, and logistic regression. First, we report variables that describe the characteristics of young people reporting suicidal ideation or one of the two types of self-harm, comparing that to the characteristics of those not reporting any of such thought or behaviour. The descriptive data analysis is intended to provide a profile of young Norwegian people who experience suicidal ideation or engage in self-harm, focusing on their home background and experiences of abuse. Second, chi-square test and t-test techniques are applied to investigate whether there is any significant association between youth suicidal ideation and self-harm and various forms of abuse experienced by young people, their current psychological health and home background variables.

Third, we apply logistic regression analysis to investigate the risk factors of suicidal ideation or self-harm among young people. As the data could not provide information about when self-harm took place, the purpose of logistic regression analysis is limited to identifying risk factors rather than predicting suicidal ideation or self-harm. In the regression analysis we also differentiate between sexual abuse before the age of 13 (i.e. during childhood) and sexual abuse after the age of 13 (i.e. during adolescence), non-physical and physical abuse

perpetrated by parents before the age of 13 and after the age of 13. We keep the same categories such as abuse perpetrated by peers and witnessing parents being abused. As we know there is a moderate correlation between abuse experiences and variables of home context, psychological health and gender, we use hierarchical method in logistic analysis in which variables of home context, psychological health and gender (as control variables) are entered in the analysis before the independent variables (i.e. abuse experiences) whose effects we are primarily concerned with.

Results

Descriptive results: The social and psychological characteristics and abuse experiences of young Norwegian people who report suicidal ideation and self-harm

Table 2 presents the characteristics of home background, gender, psychological health and violence and sexual abuse experienced by young Norwegians in general and those reporting suicidal ideation and self-harm. Girls make up the majority in the SSI group and the NSSI group. In contrast, girls are underrepresented in the suicidal ideation group compared with the overall sample. Compared to the group not reporting any suicidal ideation or self-harm behaviour, more young people with suicidal ideation or self-harm behaviour are from disadvantaged families where parents are on social welfare and have financial difficulties at home. Among them, those in the SSI group seem the most disadvantaged. The suicidal ideation group has a high representation of young people with immigrant parents, while the NSSI group has the least. In most cases, young people who reported suicidal ideation or self-harm differ significantly from the others in terms of home contextual variables.

TABLE 2 ABOUT HERE

Further, youth reporting any suicidal ideation and self-harm behaviour have higher levels of psychological problems than the group in general. It is particularly noteworthy that the mean score on psychological problems is three times higher for the SSI group compared to the group without suicidal ideation or any self-harming behaviour. Finally, a very striking feature of the young people reporting suicidal ideation or self-harm is their more frequent reporting of abusive experiences compared to the group without suicidal ideation or any self-harm. Young people in the SSI group have two or even three times more often experienced sexual abuse, physical abuse by parents and by peers, verbal abuse by parents and peers and witnessing parents being abused. Abusive experiences were less common among those who reported NSSI compared to those who reported SSI. While young people who reported suicidal ideation were more likely than the group with no ideation nor self-harm to have experienced physical and non-physical abuse, they were not more likely to have experienced sexual abuse. In this way, they differ from the two groups reporting self-harm, since these groups were more likely to report all forms of abuse.

The odds of suicidal ideation and self-harming behaviour

Table 3 presents logistic regression analyses of abuse experiences on youth suicidal ideation and self-harm controlling for gender, psychological health and home contextual variables. Among the background variables, being a girl decreases the probability of having only suicidal ideation by 64%, while it increases odds of NSSI by more than 5 times and SSI by almost 1.5. One unit increase in psychological problems doubles the odds of young people engaging in suicidal ideation and SSI but this factor does not appear to be significantly associated with NSSI. With the exception of financial difficulties, home contextual factors do not have significant associations with suicidal ideation nor any self-harming behaviour. Those

with financial difficulties at home have 30% higher odds of engaging in NSSI. After accounting for background variables, abusive experiences from home have rather limited significant associations with suicidal ideation or self-harming behaviour. Only verbal abuse perpetrated by parents, before the child was aged 13, increases the odds of suicidal ideation by 60%, and witnessing parents being verbally abused increases the odds of NSSI by 25%.

TABLE 3 ABOUT HERE

Previous verbal abuse by peers increases the odds of NSSI by 67% and by 85% for engaging in SSI while physical abuse by peers increases the odds for both these behaviours by around 30%. Sexual abuse experienced before the age of 13 was associated with 25% higher odds of NSSI and 67% higher odds of SSI but 40% lower odds for suicidal ideation. Sexual abuse experienced after the age of 13 has a similar effect on self-harming behaviour, increasing the odds of engaging in NSSI by 21% and SSI by 59% but was unrelated to having only suicidal ideation.

Discussion

The results of this study support our first hypothesis, that being subject to sexual abuse or other violence is significantly associated with suicidal ideation and self-harming behaviour among young people. Each type of abuse reported is overrepresented among young people who have engaged in suicidal ideation and self-harming behaviour. In particular, verbal and physical bullying by peers, verbal abuse by parents before the age of 13, witnessing parents being verbally abused, and sexual abuse experienced at any age substantially increase the odds of young people engaging in self-harm, even after accounting for home background variables and psychological distress. The link between verbal abuse and self-harming

behaviour is consistent with a raft of studies that have shown a relationship between being bullied and engaging in self harm (e.g. Hawton et al., 2006).

Our second hypothesis, that physical and sexual abuse might be more strongly associated with increased risk of suicidal ideation and self-harm than verbal abuse, was not supported by the statistical results. Of all types of abuse reported, verbal bullying by peers had the strongest effect on increasing the odds of self-harming behaviour while verbal abuse by parents increases the odds of having suicidal ideation and witnessing parents being bullied had more effect on self-harm than did physical abuse perpetrated by parents. In interpreting this finding, it is important to note that we did not measure the severity of each type of abuse, only their presence or absence. It may be that those reporting verbal abuse had more often experienced prolonged and severe levels than those experiencing physical abuse. It is conceivable that prolonged and severe verbal abuse from parents or peers will have a more detrimental effect than the experience of an isolated and less severe physical incident. Alternatively, it may be that those who have experienced more severe levels of physical or sexual abuse did not participate in the study. Indeed, girls who drop out of school are more likely to report having experienced sexual abuse than school attendees are (Edgardh & Ormstad, 2000) and those who have experienced physical or sexual abuse are less likely to attain upper secondary school qualifications (Boden, Horwood and Fergusson, 2007).

The statistical analysis partially supports our third hypothesis, that abuse experienced during childhood would have more effect on suicidal ideation and self harming behaviour than abuse experienced at a later age. Although sexual abuse experienced at any age significantly increases the odds of young people having engaged in NSSI and SSI, such experiences during childhood appear to have a slightly stronger effect than those occurring after the age of 13.

Evidence suggests that this effect may even persist into adulthood; Lopez-Castroman et al. (2013) found that children who experienced sexual abuse before the age of nine reported more suicide attempts than children who experienced sexual abuse after the age of nine. Further, we also found that verbal abuse perpetrated by parents before the age of 13, but not after the age of 13, significantly increases the odds of suicidal ideation. This is particularly interesting since suicidal ideation was only reported for the previous week, showing potentially long-lasting associations with early abuse experiences. However, verbal abuse perpetrated by parents before the age of 13 was not significantly related to NSSI or SSI groups; for these two groups, sexual abuse and abuse by peers was more important.

However, suicidal ideation during the past week was not associated with sexual abuse after the age of 13 and actually negatively associated with sexual abuse before the age of 13. This may be due to the short-time frame in which suicidal ideation was assessed compared with that of sexual abuse. Since suicidal ideation fluctuates and can be difficult to predict based on earlier events (Mazza and Reynolds, 1998), it may be more that recent events that are stronger predictors of recent ideation. Furthermore, the suicidal ideation group included those having suicidal thoughts only, and thus, excluded those who had both experienced suicidal ideation and self-harm. Nonetheless, this would only explain the lack of association with sexual abuse and not the surprising negative association. Further investigation to understand this is warranted.

The finding that boys more often reported suicidal ideation than did girls seems to be in contrast to previous findings (Fergusson et al., 2000; Heibron and Prinstein, 2010). It must be noted that the odds of reporting suicidal ideation only were higher for boys than for girls is

likely due to girls being more likely to report suicidal ideation and self-harm, and thus being excluded from the suicidal ideation group.

Limitations of the Study

As a national youth survey, the data have some limitations with regard to the estimations and interpretations of the prevalence and consequences of child abuse in Norway. As it was a school based survey, three groups of young people in Norway were under-represented in the sample: 1) the 2% of young Norwegian people who completed ten years' compulsory education but did not continue into the three years' upper secondary schooling; 2) the more than 30% of young people who drop out of school between the first and last years of their upper secondary education (Markussen et al., 2008); and 3) male students who are overrepresented in vocational courses at upper secondary schools and were on field practice at the time of the survey (Mossige and Stefansen, 2007).

Although several measures were taken to assure the respondents both confidentiality and access to psychological counselling in answering such sensitive questions, researchers feared under-reporting due to the under-representation of specific groups and suppressed memory or memory loss of childhood abusive experiences when the respondents were asked to recall events from their childhood (Mossige and Stefansen, 2007).

Implications for Practice

What may be drawn from this study is an awareness that a diverse range of experiences of abuse, including experiencing verbal abuse by peers and seeing a parent being abused, may be risk factors for a diverse range of suicidal and self-harming behaviours. Further, those who have experienced abuse earlier may be more likely to engage in self-harm than those who do

not experience abuse until they are in their teens. This awareness of the potentially lasting effects of abuse, including abuse occurring outside the home, and verbal abuse, may help practitioners to better direct attention towards youth who could be considering suicide and/or engaging in self-injury.

The finding that peer bullying may have a stronger effect on young people's SSI and NSSI than sexual abuse and physical violence may be indicative of the importance of a supportive peer environment in the face of other adversities. Intervention seeking to prevent youth suicide often focuses on the child and adversity at home. The findings of this study offer support for youth suicide prevention interventions that focus beyond the home and the child to intervene on peer groups and the wider community.

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Table 1. Statistical distributions of three types of abuses, two types of victims and the age when the abuse happens

Type of abuse	Category of victims	Age / time when the abuse happens	Number of cases	% of total N
Non-physical abuses	By peers	During/before the past 12 months	2095	30
	By parents	Before the age of 13	814	11.7
		After the age of 13	801	11.5
	Witness parents being verbally abused	During/before the past 12 months	2453	35.1
	Witness parents being physically abused	During/before the past 12 months	846	12.1
Physical abuse	By peers	During/before the past 12 months	1400	20.1
	By parents	Before the age of 13	1489	21.3
		After the age of 13	1048	15.0
Sexual abuse	Sexual abuse	Before the age of 13	717	10.3
		After the age of 13	1550	22.2

Table 2. A profile of Norwegian youth with suicidal ideation and self-harming behaviours: home background, gender, psychological health and abusive experiences (%)

	All	No suicidal ideation nor self-harm behaviour	Suicidal ideation	Non-suicidal self-injury (NSSI)	Suicidal self-injury (SSI)
N (%)	6979 (100)	5389 (77.2)	256 (3.7)	759 (10.9)	575 (8.2)
Female	58.4	52.4	51.8*	87.4*	79.1*
Parents live together	67.3	69	61.3	60.5*	52.9*
Both parents with higher education	36.1	37.9	30.5	31.2	27.8*
Parents own the house they live in	85.1	86	79.7*	82.2	74.8*
Both parents work full time	53.9	55.2	47.3*	52.7	46.6*
Parents receiving social welfare	23.3	21.3	30.5*	29.1*	31.5*
Home has bad economy	8.3	5.8	14.8*	13.7*	19.3*
Both parents are immigrants	8.9	8.7	14.8*	6.5*	11.1*
Mean (std.) of psychological problems	1.1 (1.1)	0.8 (0.8)	2.3 (1.2)*	1.5 (1.0)*	2.6 (1.5)*
Verbal abuse by peers during/before past 12 months	30	24.5	39.1*	43.2*	60.5*
Physical abuse by peer during/before past 12 months	20.1	17	24.6	26.5*	38.4*
Verbal abuse by parents before age 13	11.7	8.7	23.8*	15.8*	28.9*
Verbal abuse by parents after age 13	11.5	8.6	17.2*	18.2*	27.1*
Physical abuse by parents before age 13	21.3	17.5	36.3*	27.4*	42.4*
Physical abuse by parents after age 13	15	11.5	22.7*	22.9*	34.4*
Witnessing parents being verbally abused during/before past 12 months	35.1	30.1	45.3*	48.5*	60.5*
Witnessing parents physical abused during/before past 12 months	11.7	8.9	16*	17.5*	28.9*
Sexual abuse before the age of 13	10.3	7.1	10.9	18.8*	28.9*
Sexual abuse after the age of 13	22.2	17.1	26.2	36.5*	49*

Note: * indicate a difference significant at 0.05 level resulted from a Chi-square test or t-test.

Table 3. Logistic regression of abusive experiences on suicidal ideation and self-harming behaviours controlling for gender, home context variables and psychological health on suicidal behaviours (ExpB, odds ratios)

Independent variables	Suicidal ideation	Non-suicidal self injury (NSSI)	Suicidal self-injury (SSI)
Non-physical abuse by peers during/before past 12 months	0.823	1.673***	1.850***
Physical abuse by peer during/before past 12 months	0.776	1.305*	1.339*
Non-physical abuse by parents before age 13	1.595*	0.848	1.287
Non-physical abuse by parents after age 13	0.668	1.322	0.971
Physical abuse by parents before age 13	1.367	0.972	1.147
Physical abuse by parents after age 13	1.079	1.124	1.290
Witnessed parents non-physical abuse during/before past 12 months	1.017	1.248*	1.118
Witnessed parents physical abuse during/before past 12 months	0.717	0.873	1.218
Sexual abuse before the age of 13	0.593*	1.252*	1.667***
Sexual abuse after the age of 13	0.964	1.211*	1.591***
Controlling variables			
Female	0.346***	5.533***	1.452**
Psychological problems	2.314***	1.051	2.260***
Parents live together	0.933	0.927	0.828
Both parents with higher education	0.919	1.017	0.906
Parents own the house they live in	1.082	1.046	0.881
Both parents work full time	0.970	1.062	0.973
Parents receiving social welfare	1.001	1.116	0.846
Home has bad economy	1.140	1.319*	1.118
Both parents are immigrants	1.151	0.868	1.011
% (Percentage correctly predicted)	96.3	89.1	92.4
-2 Log likelihood	1861.63	4277.294	2837.157*

Note: Methods = Enter. *p<0.05, **p<0.01, ***p<0.001. N=6934 after listwise deletion of 45 missing cases (0.6%) for variable ‘gender’.