Background, experience of abuse, and mental health among adolescents in out-of-home care: a cross-sectional study of a Swedish high school national sample

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Background, experience of abuse, and mental health among adolescents in out-of-home care: a cross-sectional study of a Swedish high school national sample

Rikard Tordön, Carl Göran Svedin, Cecilia Fredlund, Linda Jonsson, Gisela Priebe and Gunilla Sydsjö

Purpose: To compare experiences for adverse events, especially sexual abuse, and mental health in a group of high school students in out-of-home care with a representative sample of peers of the same age and similar educational attainment living with their parents.

Materials and methods: A sample of 5839 students in the third year of Swedish high school, corresponding to a response rate of 59.7%, answered a study specific questionnaire. Data from 41 students living in out-of-home care were compared with data from peers not in out-of-home care in a cross-sectional analyze.

Results: Students in out-of-home care had more often an immigrant background and a non-heterosexual orientation, had more often experienced physical and penetrative sexual abuse, and more often sought healthcare for mental problems. Disclosure of sexual abuse was less common, and acts of persuasion or adults’ use of their social position was more common among students in out-of-home care.

Conclusions: Even where the protective factor ‘senior educational attainment’ is present, risks for abuse and poor mental health are evident for adolescents in out-of-home care. Disclosure of adversity, when it has occurred, ought to be higher among these adolescents with regular contact with social services, but our findings indicate tendencies for the opposite. We therefore suggest routines to be established to screen for adverse life events and mental health actively, along with general and systematic assessments of adversity and mental health during care.

Background

Children and adolescents in out-of-home care constitute a group with higher risks for many adverse events compared to peers living with birth parents [1,2]. The nature of such adversity ranges from poor physical and mental health [3–5], poor sexual and reproductive health [6], low educational achievement [7], and more exposure to potential traumatic experiences [8]. In Sweden, children in out-of-home care are defined as individuals 0–20 years receiving care, support, fostering and sometimes treatment, living in a foster home, emergency home, residential home or ‘supported living’. These placements are done either voluntarily under the Social Service Act [9], or are compulsory as called for by the Care of Young Persons (Special Provisions) Act [10].

The point prevalence, November 2014, according to public data from the Swedish National Board of Health and Welfare, was 0.96% of age-matched population, i.e. 21,412 children in ongoing out-of-home care, most common in foster family care, 13,572 and another 7566 in residential care. Of all those placed in out-of-home care, boys were in majority with the largest difference for those age 18–20, 4024 versus 1998 girls [11].

This study focused on adversities among Swedish high school students in out-of-home care, expressed as physical and psychological abuse, sexual abuse, disclosure of sexual abuse, and symptoms of mental disorders. Studies of such adversities are rare [12], and comparative studies within the group of adolescents in out-of-home care doing reasonably well with their education are almost absent in the literature. This study is mainly descriptive, but we hypothesized that shares of adversities would be higher among students in out-of-home care, though less pronounced due to the protective factor of relative school success, since all the participants had succeeded to third year in the Swedish high school.

Aim

The aim was to compare adverse experiences, mental health, sexual abuse and disclosure of abuse, among high school students in out-of-home care with a representative sample of peers of the same age and with similar levels of educational attainment, not in out-of-home care.

Materials and methods

A population-based survey of 5839 Swedish high school seniors in third year of Swedish high school with a mean age
presented in a report ‘Youths, Sex and Internet— in a changing world’ at the request of the Swedish Ministry of Health and Social Affairs. This study was based on the same data as the 2014 survey, with analyses of the answers from the adolescents reporting living in out-of-home care (n = 41) compared to answers from all other respondents (n = 5798). Students living in out-of-home care are referred to in this paper as the ‘index group’ and students living without out-of-home care are referred to as the ‘reference group’.

**Participants**

Statistics Sweden selected the participating schools, based on information from the national school register for 2013, and stratified to represent a normal population of third year Swedish high school students, taking school size, study program and geographic distribution into account. A total of 261 schools with 13,903 students was selected and 171 schools with 9773 students agreed to participate. A total of 5873 students completed the questionnaire. Of these, we excluded 34 questionnaires due to the high amount of missing data or obvious non-serious answers, yielding a 59.7% response rate. The total number of respondents included in the analysis was 5839, of which 41 were currently living in a foster home or institution. Mean age was 17.97 years (SD = 0.63) for adolescents not in care, and 18.17 (SD = 0.8) for adolescents in care.

**Procedure**

The principals for the selected schools and relevant teachers at these schools were informed about the study by mail. Participation was voluntary. Students were given written information in a letter with contact details, so they could get support if needed after filling in the questionnaire. Students gave their consent by answering the questionnaire. Statistics Sweden distributed and collected the questionnaires in digital format by computer in 165 schools and in paper format in six schools. Schools that did not reply within one month were reminded by phone. Anonymity was guaranteed regardless of distribution media. Questionnaires were answered during lecture time September–November 2014.

**Measures**

The questionnaire was based on previous studies in 2004 and 2009, with slight modifications. It comprised 116 main questions, six of which were related to background, seven related to potential risk factors, eight related to abuse or disclosure of abuse, and two related to mental healthcare that had been sought. In addition, index scales for Trauma Symptoms Checklist for Children (TSCC) [17], and Rosenberg self-esteem scale (RSES) [18], were included.

The index question for all the analyses in the present study was ‘living situation’. Answers to living situation were dichotomized into two groups In out-of-home care and Without out-of-home care to facilitate comparative analyses. The questions related to sociodemographic factors included gender, immigration, and parents’ immigration.

Questions about sexual orientation, use of contraceptives at last intercourse, occurrence of their own or their partner’s abortion, treatment for chlamydia infection, use of narcotic drugs, and age at first voluntary intercourse were also included in this article.

Experience of psychological and physical abuse was assessed by the question ‘Have you before age 18 experienced that any adult did something to you as outlined in the following?’ Answer options included 11 examples of such abuse and affirmative answers were recoded into ‘Psychological abuse’ or ‘Physical abuse’ in the statistical analyses.

Experience of sexual abuse was assessed by the question ‘Have you ever been exposed to any of the following against your will’ (multiple answers allowed), with six examples of sexual abuse ranging from denuding to penetrative abuse and no exposure to sexual abuse, see Table 3. A follow-up question asked if sexual abuse had been experienced once, 2–5 times or more than 5 times. This was dichotomized in the statistical analysis to once or more than once. Another follow-up question to the sexual abuse question was about ways to enable abuse the first occurrence. It was formulated ‘What forms of persuasion, pressure or enforcement were used by the person that did this to you the first time?’ with options presented in Table 3. Further follow-up questions on sexual abuse were: ‘Have you told anyone what happened against your will?’, ‘Has it been reported to social services?’, and ‘Has it been reported to police?’

Self-reported mental health was assessed by questions about healthcare that had been sought, as presented in Table 4. Occurrence of non-suicidal self-injury was investigated with a screening question ‘Have you ever done something to purposely hurt yourself without intending to die?’ with options Yes or No.

The questionnaire included TSCC [17] which enabled assessment of trauma symptoms. TSCC is a widely used [19] self-report instrument designed to assess trauma symptoms in children and adolescents up to age 19 [20–22]. It comprises 54 items and reports results in six subscales: anxiety, depression, post-traumatic stress, dissociation, anger and sexual concerns. Cronbach’s alpha has been assessed to be 0.77 to 0.89 for subscales and 0.84 for the total instrument [17]. The Swedish translation was validated and Cronbach’s alpha assessed 0.78 to 0.83 in the subscales and 0.94 for the total scale [23]. In the present study Cronbach’s alpha was found acceptable, above 0.80 for subscales and total scale, with the exception for subscale ‘sexual concerns’, which was 0.65 [14].

Self-esteem was assessed by Rosenberg’s self-esteem scale, [18]. It comprises 10 items with a four-step Likert-scale ranging from ‘strongly disagree’ to ‘strongly agree’. Cronbach’s alpha for RSES was in the present study 0.90.
Table 1. Sociodemographic factors for adolescents in out-of-home care, and peers not in out-of-home care.

<table>
<thead>
<tr>
<th></th>
<th>Without out-of-home care</th>
<th>In out-of-home care</th>
<th>Total</th>
<th>( \chi^2 ) df Two-sided</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 5792–5798</td>
<td>n = 41</td>
<td>n = 5833–5839</td>
<td></td>
</tr>
<tr>
<td>Total nr. of participants</td>
<td>5798  99.3</td>
<td>41  .7</td>
<td>5839</td>
<td>18.4 2</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Boy</td>
<td>2583  44.6</td>
<td>17  41.5</td>
<td>2600</td>
<td>44.5</td>
</tr>
<tr>
<td>Girl</td>
<td>3162  54.6</td>
<td>21  51.2</td>
<td>3183</td>
<td>54.5</td>
</tr>
<tr>
<td>‘Division doesn’t fit me’</td>
<td>51  .9</td>
<td>3  7.3</td>
<td>54</td>
<td>.9</td>
</tr>
<tr>
<td>Study program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theoretical</td>
<td>4111  70.9</td>
<td>25  61.0</td>
<td>4136</td>
<td>70.8</td>
</tr>
<tr>
<td>Practical</td>
<td>1687  29.1</td>
<td>16  39.0</td>
<td>1703</td>
<td>29.2</td>
</tr>
<tr>
<td>Immigrant (born abroad)</td>
<td>513  8.9</td>
<td>9  22.0</td>
<td>522</td>
<td>8.9</td>
</tr>
<tr>
<td>Father immigrant</td>
<td>1270  21.9</td>
<td>17  41.5</td>
<td>1287</td>
<td>22.1</td>
</tr>
<tr>
<td>Mother immigrant</td>
<td>1267  21.9</td>
<td>16  39.0</td>
<td>1283</td>
<td>22.0</td>
</tr>
<tr>
<td>Living situation(^a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With both parents or alternating</td>
<td>4157  71.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With one parent</td>
<td>1249  21.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alone, with siblings or partner</td>
<td>386  6.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| \(^a\)Fishers exact test. \(^b\)Merged from 7 to 4 alternatives, combining ‘one parent’/‘one parent with new partner’, ‘both parents’/‘alternating’ and ‘alone’/‘with siblings or partner’.

Table 2. Sexual orientation, sexual health and use of narcotic drugs among adolescents in out-of-home care, and peers not in out-of-home care.

<table>
<thead>
<tr>
<th></th>
<th>Without out-of-home care</th>
<th>In out-of-home care</th>
<th>Total</th>
<th>( \chi^2 ) df Two-sided</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 3765–5798</td>
<td>n = 24–41</td>
<td>n = 3789–5839</td>
<td></td>
</tr>
<tr>
<td>Sexual orientation(^c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>5056  87.2</td>
<td>28  68.3</td>
<td>5084</td>
<td>87.1</td>
</tr>
<tr>
<td>Homosexual</td>
<td>83  1.4</td>
<td>0  0</td>
<td>83</td>
<td>1.4</td>
</tr>
<tr>
<td>Bisexual</td>
<td>267  4.6</td>
<td>4  9.8</td>
<td>271</td>
<td>4.6</td>
</tr>
<tr>
<td>Other or uncertain</td>
<td>392  6.8</td>
<td>9  22.0</td>
<td>401</td>
<td>6.9</td>
</tr>
<tr>
<td>Used contraceptives last time</td>
<td>2582  67.8</td>
<td>16  61.5</td>
<td>2598</td>
<td>67.8</td>
</tr>
<tr>
<td>Has had an abortion</td>
<td>240  4.1</td>
<td>3  7.3</td>
<td>243</td>
<td>4.2</td>
</tr>
<tr>
<td>Treated for chlamydia infection</td>
<td>235  4.1</td>
<td>4  9.8</td>
<td>239</td>
<td>4.1</td>
</tr>
<tr>
<td>Has used narcotic drugs(^c)</td>
<td>647  11.2</td>
<td>4  9.8</td>
<td>651</td>
<td>11.1</td>
</tr>
<tr>
<td>Mean age sexual debut</td>
<td>15.5 SD = 1.6</td>
<td>15.0 SD = 3.0</td>
<td>t = 1.55</td>
<td>.121</td>
</tr>
</tbody>
</table>

\(^c\)Fishers exact test. \(^c\)Merged from six to four by combining ‘queer’, ‘uncertain’ and ‘none of these’ to ‘other or uncertain’.
\(^b\)Seven options, reflecting different types of drugs dichotomized to Yes or No for any type.

Analyses

Categorical data were analyzed with Pearson’s Chi square test, or Fisher’s exact test where expected counts in any cell were less than five. Binary logistic regression analyses using the index variable, ‘living in out-of-home care’ or ‘not living in out-of-home care’ as independent/predictor, was done. Continuous variables, such as TSCC subscales and RSES, were presented with means, standard deviations, and t-test for independent groups was calculated to assess differences. Percentages presented in the tables relate to the number of respondents answering the question. All analyses were performed using the IBM SPSS Statistics software, version 24.0.

Results

Demographic and other background characteristics

The total number of responding students included in the analysis was 5 839, whereof 5 798 (99.3%) constituted the reference group without out-of-home care and 41 (0.7%) the index group in out-of-home care. Gender distribution was uneven in both groups with a larger proportion of girls and, in the index group adolescents that answered this division doesn’t fit me \((\chi^2 = 18.4, df = 2, p < .001)\). No differences in distribution concerning study program were found. Being an immigrant was more common in the index group, 22% compared to 8.9% in the reference group \((\chi^2 = 8.6, df = 1, p = .009)\). Having parents born abroad was roughly twice as common in the index group. Data concerning sociodemographic factors are presented in Table 1.

Sexual orientation, sexual health and use of narcotic drugs

Sexual orientation differed between index and reference groups, with a smaller proportion stating heterosexual orientation, 68.3% in the index group, compared to 87.2% in the reference group. Shares for bisexual orientation were twice as high, 9.8% in the index group compared to others, 4.6%, and the shares that reported ‘other or uncertain’ were more than threefold, 22% in the index group, versus 6.8% in the reference group, \(\chi^2 = 18.3, df = 3, p < .001\).

No differences were found in relation to the use of contraceptives at latest intercourse, one’s own or partners...
experience of abortion, or been treated for chlamydia infection. Nor was any difference found between groups in having used narcotic drugs or mean age for sexual debut, i.e. having voluntary oral-, vaginal-, or anal intercourse. Table 2 presents proportions in index- and reference group for sexual orientation, sexual health and use of narcotic drugs.

### Abuse and related experiences

#### Psychological abuse

Table 3 presents results from binary logistic regression analyses of reported exposure to psychological, physical or sexual abuse. Analyses of psychological abuse showed affirmative answers by 27 (71.1%) in the index group and 3318 (57.7%) in the reference group (OR = 1.8, CI 95% = 0.89–3.6, p = .101).

<table>
<thead>
<tr>
<th>Ways to enable sexual abuse</th>
<th>Without out-of-home care</th>
<th>In out-of-home care</th>
<th>Total</th>
<th>Odds ratio</th>
<th>95% CI</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deceiving</td>
<td>164 (15.5)</td>
<td>1 (10.0)</td>
<td>165 (15.4)</td>
<td>0.61 (0.08–4.8)</td>
<td>1</td>
<td>.638</td>
<td></td>
</tr>
<tr>
<td>Use of position</td>
<td>311 (29.2)</td>
<td>7 (63.6)</td>
<td>318 (29.6)</td>
<td>4.2 (1.2–14.6)</td>
<td>1</td>
<td>.022</td>
<td></td>
</tr>
<tr>
<td>Persuasion</td>
<td>246 (23.1)</td>
<td>7 (63.6)</td>
<td>253 (23.5)</td>
<td>5.8 (1.7–20.1)</td>
<td>1</td>
<td>.056</td>
<td></td>
</tr>
<tr>
<td>Threat of rejection</td>
<td>54 (3.4)</td>
<td>0 (0)</td>
<td>54 (3.4)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Holding on</td>
<td>216 (13.4)</td>
<td>3 (17.6)</td>
<td>219 (13.5)</td>
<td>1.4 (3.4–9.4)</td>
<td>1</td>
<td>.612</td>
<td></td>
</tr>
<tr>
<td>Beating or hurting</td>
<td>22 (1.4)</td>
<td>0 (0)</td>
<td>22 (1.4)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Gave alcohol, narcotics or pills</td>
<td>50 (4.7)</td>
<td>0 (0)</td>
<td>50 (4.7)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>437 (40.8)</td>
<td>1 (10.0)</td>
<td>438 (40.5)</td>
<td>0.16 (0.02–1.3)</td>
<td>1</td>
<td>.034</td>
<td></td>
</tr>
<tr>
<td>Have disclosed sexual abuse to anyone</td>
<td>715 (66.4)</td>
<td>3 (33.3)</td>
<td>718 (66.1)</td>
<td>0.25 (0.06–1.0)</td>
<td>1</td>
<td>.005</td>
<td></td>
</tr>
<tr>
<td>Reported to social services</td>
<td>48 (4.5)</td>
<td>0 (0)</td>
<td>48 (4.4)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Reported to police</td>
<td>99 (9.2)</td>
<td>1 (11.1)</td>
<td>100 (9.2)</td>
<td>1.2 (0.15–9.9)</td>
<td>1</td>
<td>.845</td>
<td></td>
</tr>
</tbody>
</table>

*4 Dichotomized from three to two alternatives by merging ‘2-5 times’ and ‘more than 5 times’ to ‘more than once’. *n* = 1086 reference group (20 missing) and nine index group (two missing).

*3 Multiple answers possible.

*1077 reference group (29 missing) and nine index (two missing).

#### Physical abuse

Experience of physical abuse was affirmed by 19 (50.0%) in the index group, and by 1789 students (31.2%) in the reference group, reflecting a higher risk (OR = 2.2, 95% CI = 1.2–4.2, p = .015) for students in out-of-home care.

#### Sexual abuse

Experience of sexual abuse of any kind was affirmed by 11 (31.4%) in the index- and 1106 (20.9%) in the reference group. Binary logistic regression did not show a difference between groups (OR = 1.7, 95% CI = 0.85–3.6, p = .131).

However, analyses of answers affirming exposure to penetrative abuse (oral, vaginal or anal) reflected a difference. Nine students (22.0%) in the index group affirmed exposure to penetrative sexual abuse compared to 344 (6.1%) of students in the reference group (OR = 4.3, CI 95% = 2.1–9.2, p < .001). A follow-up question for those affirming any sexual abuse asked if it had occurred once, two to five times, or more than five times. Slightly half, 604 of 1086 (55.6%, 20 missing data in follow-up question) students not in out-of-home care had experienced any sexual abuse more than once, compared to eight of nine (88.9%, two missing data in follow-up question) students not in out-of-home care.

Of those affirming sexual abuse, there was a difference in forms of persuasion, pressure or enforcement used to enable the abusive act in answer options ‘Use of societal position’ (OR = 4.2, 95% CI = 1.2–14.6, p = .022) and in ‘Persuasion’ (OR = 5.8, CI 95% = 1.7–20.1, p = .005). This finding reflects a higher risk for these ways to facilitate sexual abuse towards students in out-of-home care.

Yet another follow-up question to those affirming any sexual abuse investigated disclosure of exposure to sexual abuse. First, two thirds, 715 (66.4%) of students in the reference group and a reversed proportion, one third (33.3%) of students in index group affirmed disclosure to anyone. When asked if the sexual abuse was ever reported to social services, only 48 of 1077 (4.5%) in the reference group, and none in the index group, affirmed. Report to police was 99 (9.2%) of reference group and one (11.1%) in the index group.

#### Sought healthcare for psychiatric disorders

The analyses revealed higher risks for having sought healthcare for students in out-of-home care compared to peers in all categories of mental problems, except for autism spectrum disorders, presented in Table 4.

Having sought help for ‘depression/anxiety’ was 19% for the reference group and 50% for the index group (OR = 4.3, 95% CI = 2.2–8.2, p < .001). ‘Eating disorders’ was 5.7% for reference group and 20.0% for index group (OR = 4.1, 95%...
Table 4. Self-reported mental health for adolescents in out-of-home care, and peers not in out-of-home care.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Without out-of-home care</th>
<th>In out-of-home care</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 5544–5733</td>
<td>n = 35–38</td>
<td>n = 5579–5771</td>
</tr>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Sought help for mental problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression or anxiety</td>
<td>1067 (19.0)</td>
<td>18 (50.0)</td>
<td>1085 (19.2)</td>
</tr>
<tr>
<td>Eating disorders</td>
<td>317 (5.7)</td>
<td>7 (20.0)</td>
<td>324 (5.8)</td>
</tr>
<tr>
<td>Inattention problems (ADHD)</td>
<td>398 (7.1)</td>
<td>11 (31.4)</td>
<td>409 (7.3)</td>
</tr>
<tr>
<td>Autism spectrum disorder</td>
<td>107 (1.9)</td>
<td>2 (5.7)</td>
<td>109 (2.0)</td>
</tr>
<tr>
<td>Suicide attempt</td>
<td>223 (4.0)</td>
<td>7 (19.4)</td>
<td>230 (4.1)</td>
</tr>
<tr>
<td>Alcohol or substance abuse</td>
<td>122 (2.2)</td>
<td>4 (11.4)</td>
<td>126 (2.3)</td>
</tr>
<tr>
<td>Any of above mental problems</td>
<td>1447 (25.7)</td>
<td>21 (58.3)</td>
<td>1468 (25.9)</td>
</tr>
<tr>
<td>Non-Suicidal Self Injury</td>
<td>1021 (17.8)</td>
<td>14 (36.8)</td>
<td>1035 (17.9)</td>
</tr>
</tbody>
</table>

CI = 1.8–9.5, p = .001). ‘ADHD/ADD or similar’ was 7.1% for students in the reference group and 31.4% in the index group (OR = 5.6, 95% CI = 2.9–12.3, p < .001). Having sought help for ‘suicide attempt’ was 4.0% for students in the reference group and 19.4% for the index group (OR = 5.8, 95% CI = 2.5–13.3, p < .001). ‘Alcohol or substance abuse’ was 2.2% for reference group and 11.4% for index group (OR = 5.7, 95% CI = 2.0–16.5, p = .001). ‘Autism/Asperger’ was 1.9% for students in the reference group and 5.7% in the index group (OR = 3.1, 95% CI = 0.73–13.0, p = .126). A summary analysis with all ‘Yes’ answers to having sought help in any of the categories, showed 25.7% for students not in out-of-home care versus 58.3% for students in out-of-home care (OR = 4.0, 95% CI = 2.1–7.9, p < .001).

Non-suicidal self-injury was affirmed by 1021 (17.8%) of students in the reference group and 14 (36.8%) of students in the index group (OR = 2.7, 95% CI = 1.4–5.2, p = .003).

Trauma symptoms and self-esteem

Trauma symptoms, assessed by answers in the included TSCC [17] revealed differences in two subscales, ‘Depression’ (p = .001) and ‘Post-traumatic Stress’ (p = .039), where students in out-of-home care reported a higher mean score. Subscales for ‘Anxiety’, ‘Anger’, ‘Dissociation’ and ‘Sexual concerns’ did not show differences. Table 5 presents the result for each subscale.

Self-esteem, measured with the Rosenberg self-esteem scale [18] was found to be lower in students in out-of-home care (p < .001). Mean score for students in the reference group was 21.1 (SD = 6.6) and 16.7 (SD = 7.6) for students in the index group.

Discussion

This study investigated experiences of abuse, trauma symptoms, sexual experiences, drug use and seeking mental health care for students in out-of-home care, compared to peer students not placed in out-of-home care. The results can be summarized in four main findings.

First, abuse experiences showed higher shares for students in out-of-home care in all categories, most prominent in physical (OR = 2.2) and penetrative sexual abuse (OR = 4.3). Concerning sexual abuse perpetrators’ use of position and persuasion was associated with abusive events more often among students in out-of-home care. Data also suggest that if sexual abuse is ever experienced, it is likely to occur again. Only one-third of students in out-of-home care had disclosed the event to anybody, compared to two thirds of their peers. None had reported to social services and only one to police. This is in line with conclusions in population-based studies like Lahtinen et al. [24], or epidemiological research like Priebe and Svedin [25] who found that the most common reason for not disclosing to adults was that the abuse was not considered serious enough.

Second, students in out-of-home care reported higher rates of having sought help for depressive and anxiety problems, eating disorders, inattention problems, suicide attempts, alcohol or substance abuse, and non-suicidal self-injury. Regarding trauma symptoms, the subscales
‘depression’ and ‘posttraumatic stress’ in TSCC showed higher mean values in the index group. Findings of a more burdened mental health for students in out-of-home care are in line with reports in the literature of prevalence of poor mental health for children and adolescents in out-of-home care [26–29]. Leslie et al. [26] found that over 50% of children in foster home care had sought mental outpatient health services. In Norway, Lehmann et al. [27] found a prevalence of 51% in younger foster home children for meeting criteria for at least one DSM-IV diagnose. Even self-esteem was significantly lower in the group of students in out-of-home care [30].

Third, gender division and sexual orientation differed between the two groups. A substantially larger share of students in out-of-home care regarded themselves as non-binary gender, 7.3% compared to 0.9% in the reference group. In a regional health and lifestyle survey study of students in East Sweden, ‘Om mig’ [‘About me’], of 3168 students in the second year of high school, this non-binary gender group comprised 1.4% and were over-represented in most of the variables measuring health problems and poor well-being [31]. Gender nonconformity among youth is reported as a factor related to increased need for attention due to higher risks of negative psychosocial outcome [32]. The pattern of sexual orientation was also found to be different, with a smaller proportion of heterosexual orientation, and higher in the categories bisexual and ‘other or uncertain’ for students living in out-of-home care. Having a sexual orientation other than heterosexuality has been found to be associated with higher risks for mental health problems [33]. In this study, 13 of the 41 (32%) youth in care, aged slightly over 18 years in mean, reported themselves as having a non-heterosexual orientation. This is an even higher proportion than other studies identifying higher proportion of non-heterosexual orientation among children in care, as for example Dettlaff et al. [34] who found 15.5% LGB in a sample of children from age 11 years involved with the child care system. Wilson and Kastanis [35] found 19% of the Los Angeles children in foster care were LGBTQ. The mean age in their sample was close to 16 years. However, another recent study by Wilson et al [36] investigated sexual orientation minority among youth in custody, with a more precise age analysis. Youth age 18 or more reported a gay/bisexual orientation in 35.1% of the boys and a lesbian/gay/bisexual orientation in 28.9% of the girls. This is figures on par with our findings for youth in the same age, even though juvenile correction youth and youth in out-of-home care would not be considered having the same population characteristics. In an earlier study of 3 498 students in third grade if Swedish high school [37], LGB students reported more mental health problem and lower self-esteem, compared to their heterosexual peers. They had more often experienced sexual abuse and had sold sex more often. It is plausible to assume that belonging to a sexual minority group, creates higher levels of constraints and stress. It is also plausible to think that the increased mental health problems reported by the non-heterosexual group exposes them to an increased risk of having community support including the need for out-of-home care.

Fourth, and finally, more students in the out-of-home group had an immigrant background either by themselves (born abroad) or through their parents. Foster home is the primary choice for unaccompanied refugee children, possibly explaining some of the variation for students born abroad. Having a father or mother born abroad raises questions of causality. Possibly, the asylum process many migrating families face could cause strain and increase mental, social and financial pressure to such an extent, that children in the family are exposed to conditions of emotional and caring neglect, resulting in a need for social out-of-home care [38].

Methodological discussion

This study builds on data originally collected for a broader aim, to gain knowledge about youths sexuality, experiences of abuse [39], sexual exposure and sexual exposure online [13]. Above that, the aim for the original data collection was extended to cover children and youth in sex trade/prostitution [15,40] and youth that use sex as self-injury [14]. From this national data collection, several analyses have been done, each with different specific aims, but within the same domain of scientific interest [13–16,25,39–47]. The present study builds on that tradition, focusing on one of the most vulnerable groups in society, adolescents in out-of-home care.

Strengths and limitations

The approach, to make use of data originally collected with a broader or to some extent different purpose, has strengths as well as limitations. One of the strengths is that it eliminates risks of bias related to objectivity in study design. Studying youths in high school is also a way to balance the factor of educational attainment, considered to have strong impact on risks to social exclusion and adverse outcome in early adulthood.

Limitations related to the study are firstly that the studied group is small, in this study only 41 in the index group, with implications of statistical power and reliability. Secondly, the group of youth in out-of-home care in this study could not be regarded as representative for the whole group of youth in out-of-home care in normal population, because of the skewed proportion of educational attainment, with a substantial underrepresentation in high school [48]. This is not a unique phenomenon in Sweden, and has been described in multinational studies such as the YiPPEE project, Young people In Public care—Pathways to Education in Europe [49]. There is no statistical information available for attendance to third year of Swedish high school, specifically for youths in out-of-home care. However, we know from national statistics for 2015 that only 55% of children in out-of-home care during the last year of complimentary school finish duly qualified to high school, and 28% placed any time during their childhood finish high school. Compared to peers not in care, the figures are 88% finished complimentary school and 79% finished high school [50]. The shares, with small variations, have been stable for the last two decades.
Thirdly, the data, collected for a broader purpose than presented in this article, contain no information about age for placement, the extent of time in placement, or the reason for placement in out-of-home care. All these factors can respectively influence the outcome of measures in the study, which makes it impossible to draw conclusions about causality. There are also a significant higher proportion of immigrants in the index group, but no information if they were refugees, which might limit the possibilities of generalization due to adverse experiences related to refugee migration.

Conclusion
This study is one of few studies focusing on late adolescents in out-of-home care, with a reasonably well educational attainment, in the Nordic countries. We conclude that among students in the third year of Swedish high school, despite a possible favorable skewed sample of higher educational achieving adolescents, risks of physical and severe sexual abuse are higher among those in out-of-home care, as are risks of mental health problems and trauma related symptoms. Disclosure rates of sexual abuse were on the other hand lower than among peers.

Another conclusion is that among Swedish 18-year old students in out-of-home care, there is a substantial higher share reporting non-heterosexual orientation, than peers in the same age, possibly co-related to exposure to adversities and poor mental health.

There are many contributors to mental health problems for children and youth in out-of-home care, so it would not be meaningful to put a general highlight either on factors related to events preceding placement; factors occurring during out-of-home care or the placement itself. Nevertheless, further research has to find ways to recognize, assess and deliver support to mental health problems in children in out-of-home care, regardless of cause. It is known since earlier research [24,25], that children and youth subjected to sexual abuse does not primarily disclose to adults, a finding that are even more pronounced in this study. Even if this is not new knowledge, it is important to consider general screening for mental health, using a systematic methodology and conducted by health professionals, for youth in out-of-home care, both at the time of placement and repeated during care. We also suggests that social services needs to improve ways to communicate in such a way that abused children and youth in their care can disclose and rely on proper protective actions. There is also support for preventive age-appropriate safety education, and supporting peers passing information of abuse on to adults.

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Ethical approval
The Regional Ethical Review Board of Linköping University, Sweden (Dnr. 131-31) ethically approved the study. The participants received written information about the study before answering the questionnaire and gave informed consent for participating by filling in the questionnaire. According to the Ethical Act of Sweden, active consent is not required from parents of adolescents’ aged 15 years or older.

Disclosure statement
No potential conflict of interest was reported by the authors.

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References


