

# Self-Esteem and Oral Condition of Institutionalized Abused Children in Japan

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**Objective:** Abused children have been reported to have low self-esteem. The aim of this study was to investigate the effects of dental intervention on self-esteem, oral condition, and concern for oral health in abused children admitted to a child protection service facility. **Study design:** We examined the oral condition of 65 children (34 boys, 31 girls; aged 2–15 years), instructed them in tooth-brushing. Self-esteem was examined using Pope's five-scale test for children. Before discharge, the children completed questionnaires on concern about their oral health. **Results:** The findings revealed the reasons for admission were child abuse and neglect (n=45), domestic violence against the mother (n=20), special needs (n=11), delinquency (n=7), school refusal (n=2), and other reasons (n=3). Thirty-five of the 65 residents (54%) needed treatment for caries. Of these, 24 (69%) were abused children and 11 (31%) were admitted due to other reasons. Mean self-esteem score differed significantly between the resident children (n=43) and an outpatient control group (n=102) (59.16±14.54 vs 73.92±16.81, respectively;  $p<0.01$ ). **Conclusion:** Although the abused children had low self-esteem, after dental intervention, positive answers regarding oral health were obtained. The findings suggest that dental interventions might be effective for helping to improve the self-esteem of abused children.

**Key words:** child abuse, self-esteem, oral health, dental intervention

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## INTRODUCTION

In recent years, greater social attention has been paid to problems related to pediatric psychiatry and psychology, such as child abuse, school refusal, and anorexia nervosa. The socioeconomic conditions of childcare are often reflected in children's oral conditions. In particular, abused children tend to show higher rates of caries, untreated teeth,<sup>1</sup> and oral trauma.<sup>2</sup> To improve the oral health of abused children, it is necessary for pediatric dentists to actively intervene and for the children to become aware of the need for and daily efforts required for dental care.

Self-esteem is connected with a person's social world and can be defined as a personal judgment of an individual's worthiness, derived from the reflected appraisal of others, and having a dimension with "positive" and "negative" ends.<sup>3</sup> It is a subjective experience which the individual conveys to others by overt expressive behavior. Where the appraisal is negative the level of self-esteem is likely to be low. The individual with high self-esteem feels able to cope with adversity and is sufficiently competent to achieve success, whereas the individual with low self-esteem feels helpless and inadequate.<sup>4</sup> Self-esteem consists of one's own evaluations of self-concept and is formed based on parental attitudes towards oneself during infancy and through interactions with teachers and peers during childhood.<sup>5</sup> Abused children are said to have low self-esteem, to be less likely to have a sense of own existence, and often to be self-important.<sup>6</sup> It has also been suggested that a positive relationship exists between self-esteem and tooth-brushing

behavior, and motivation.<sup>7</sup> Abusive parents are also less cognizant of their children’s overall health, and thus their children seldom receive regular dental checkups and are less concerned about oral care.

This study sought to examine whether abused children’s awareness of physical health could be increased by providing them with oral care and health education and improving their health habits, such as brushing their teeth on a regular basis. The study also intended to examine whether such intervention would contribute to the children’s recognition of their own self-importance and help to improve their self-esteem.

**MATERIALS AND METHOD**

Participants were 65 children (34 boys, 31 girls; aged 2–15 years) who were temporarily being cared for at a child protection service facility in Niigata prefecture, Japan between September 2008 and December 2009 (Fig. 1). We visited the agencies regularly, once or twice a month, to provide dental checkups, plaque tests, tooth brushing instruction, and mechanical tooth surface cleaning. We also recorded their dental caries status, treatment progress, and oral status (e.g. plaque control). A pediatric dentist under adequate lighting and in a seated position conducted oral examinations.

A Japanese language version of 60 items based on Pope’s five-scale test of self-esteem for children<sup>8</sup> (global scale, academic scale, body scale, family scale, social scale, lie scale) was created to measure the participants’ self-esteem. Furthermore, 10 items related to dental care (dental scale), such as tooth brushing habits, experiences of dental visits, favorite foods, were added to the questionnaire. The participants completed the survey on dental status when leaving their last dental visit upon discharge from the child protection service facility. As a control group, we used data from 102 pediatric patients (aged 6–15 years) visiting the Department of Pediatric Dentistry, Niigata University Medical and Dental Hospital, Japan. Welch’s test was used to compare the mean scores for self-esteem means between the groups and statistical analysis was conducted.

The study protocol was approved by the Ethics Committee of the Department of Dentistry, Niigata University (Approval No. 20-R27-08-09). Data for analysis were anonymized so individuals could not be identified.

**RESULTS**

Reasons for the participants entering the child protection service facility included the following (including overlaps): 45 cases of abuse (21 for physical abuse, 14 for psychological abuse, 2 for sexual abuse, and 8 for neglect), 20 cases of domestic violence, 11 cases of special needs, 7 cases of delinquency, 2 cases of school refusal, and 3 cases for other reasons (Table 1). Thirty-nine of the 65 residents were abused children. Among the 65 participants, 35 needed dental treatment (54%). Untreated decayed teeth were found among 24 (62%) of 39 abused children and among 11 (42%) of 26 non-abused children (Fig. 2).

Comparisons of the mean self-esteem scores between the participants group (43 residents, aged 7–15 years) and the control group showed that the participants group had significantly lower scores on the global, academic, body, family, social, and dental scales ( $p < 0.01$ ). No significant difference was found in the lie scale between the two groups. The self-esteem mean was significantly lower for the residents group, at  $59.16 \pm 14.54$  compared to  $73.92 \pm 16.81$  for the control group ( $p < 0.01$ ; respectively) (Table 2, Fig. 3).

The results of the questionnaire which was conducted 30 residents upon discharge from the child protection facility and after receiving a period of checkups and health education showed that more children recognized the importance of oral hygiene and dental care: 87% wanted to take care of their teeth (26/30 participants), 80% became better at brushing their teeth (24/30 participants), and 73% felt good about brushing their own teeth (22/30 participants).

**DISCUSSION**

The increased number of cases of child abuse in recent years has become a global social problem. In the summer of 1990, the U.S. Advisory Board on Child Abuse and Neglect declared that child abuse and neglect in the United States is a “national emergency”. Associated with this, notifications of abuse to child protection service agencies have increased over the years, with 66,701 cases reported in Japan in 2012 and 978 cases in Niigata prefecture.<sup>9</sup> At the agency where the present study was taken conducted, reasons for admission among 60% (39/65) of cases were related to abuse victimization.

**Figure 1. Distribution of the subjects according to gender**

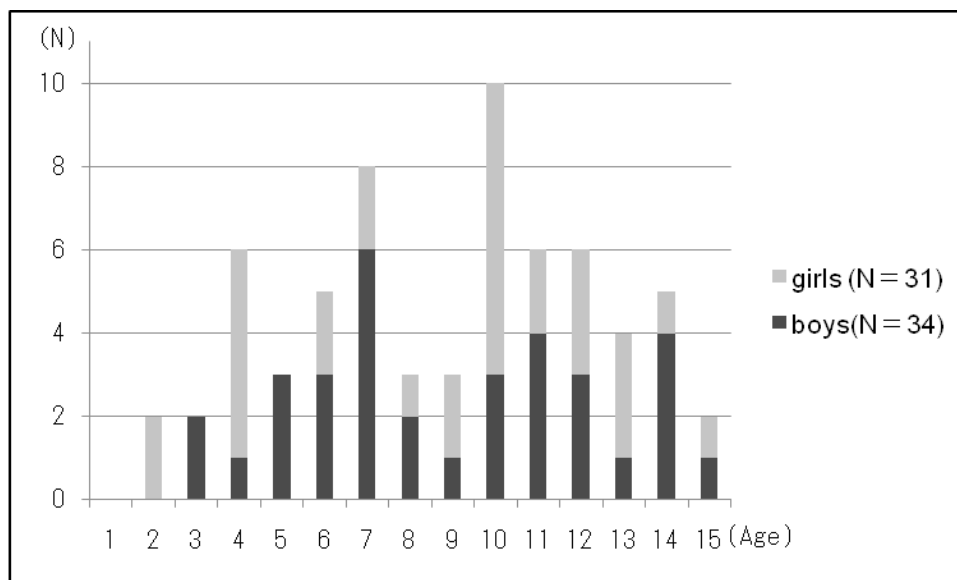


Figure 2. The number of the children with untreated decayed teeth

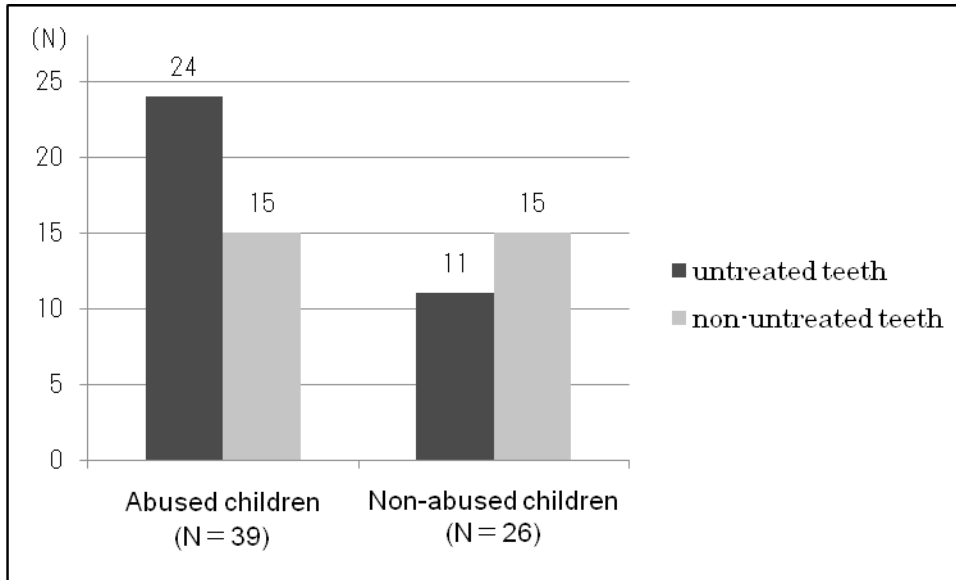


Figure 3. Mean self-esteem scores

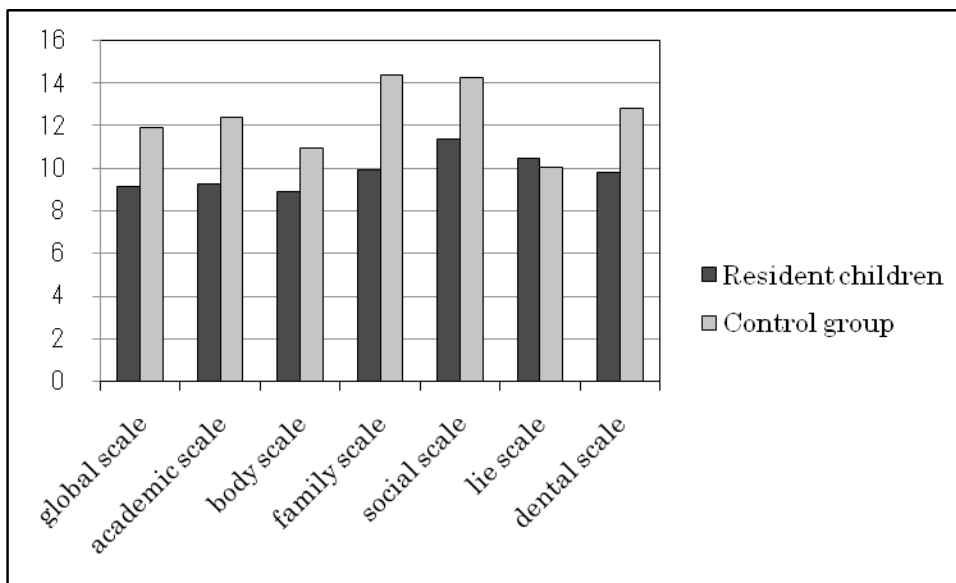


Table 1. Reasons for the participants entering the child protection service facility (including overlaps)

Abuse	45
physical abuse	21
psychological abuse	14
sexual abuse	2
neglect	8
Domestic violence	20
special needs	11
delinquency	7
school refusal	2
other reasons	3
Total	88

Table 2. Mean self-esteem scores

	Resident children (N=43)	Control group (N=102)
global scale *	9.14±3.24	11.90±3.74
academic scale *	9.26±3.58	12.38±4.12
body scale *	8.88±2.89	10.97±3.74
family scale *	9.93±4.37	14.39±3.84
social scale *	11.35±4.05	14.25±3.66
lie scale	10.47±2.75	10.03±2.70
total score *	59.16±14.54	73.92±16.81
dental scale *	9.79±3.61	12.80±2.70

(\*: p<0.01)

Abused children tend to have oral trauma and multiple caries. In addition, abused and/or neglected children are reported to have multiple untreated caries.<sup>1,2</sup> In the present study, 62% of abused children had untreated decayed teeth problems, compared to 42% of non-abused children, indicating that abused children tend not to visit a dentist for treatment. Interventions by dental professionals such as screening and examining suspected cases of child abuse during checkups and treatments are expected to result in early detection and warning of abuse. However, in reality, it seldom leads to actual notification of the child protection service agencies. In the future, dental professionals should have appropriate knowledge about child abuse and become more aware that they can play important roles in preventing the escalation of ongoing abuse. They should also collaborate with professionals from other disciplines to detect early abuse cases.

Research on self-esteem has been conducted in various populations and it is well known that abused children tend to have lower self-esteem.<sup>6</sup> Consistent with this, our study showed that the group of abused children had significantly lower self-esteem compared to the group of non-abused children. Much of the research on self-esteem in healthcare fields has examined its link with health behavior to improve one's health or prevent disease. These studies have shown that people with higher self-esteem levels are better at maintaining favorable health.<sup>10,11</sup> In dentistry, relationships between self-esteem and adaptability to orthodontic treatment,<sup>12</sup> acceptance of dentures,<sup>13</sup> and oral health behaviors including tooth brushing habits in particular<sup>14</sup> have been examined. Studies examining the relationship between tooth brushing habits and self-esteem showed that the higher self-esteem is, the higher the frequency of tooth brushing is.<sup>7</sup> In our study, a higher number of children recognized the importance of oral hygiene and dental care: 87% wanted to take care of their teeth, 80% became better at brushing their teeth, and 73% felt good about brushing their teeth. Thus, the findings indicate that dental intervention may be effective in helping to improve abused children's self-esteem and their abilities to practice oral care.

The findings suggest that abused children's awareness of their physical health can be increased by providing them with oral care and health education and by improving their health habits such as tooth brushing on a regular basis. In the future, dental professionals will need to actively intervene with abused children to ensure their long-term oral health.

## CONCLUSION

Abused children have been reported to have low self-esteem. To investigate the effects of dental intervention on self-esteem among abused children, we examined the oral condition of 65 (34 boys, 31 girls; age range, 2-15 years) children admitted to a child protection service facility, and instructed tooth-brushing.

Mean self-esteem score was 59.16±14.54 in residents (n=43) and 73.92±16.81 in the outpatient control group (n=102), which was a statistically significant difference ( $p<0.01$ ). Of the 30 residents who completed the questionnaire at discharge, a higher number of children recognized the importance of oral hygiene and dental care. Although the abused children had low self-esteem, after dental intervention, positive answers regarding oral health were obtained. The present findings suggest that dental interventions might be effective for improving the self-esteem of abused children.

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