

# Malocclusion, Orthodontics and Bullying

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**Abstract:** Bullying is endemic among schoolchildren, and the effects can be devastating and long lasting. The persistently bullied child appears to represent a certain psychological type, with poorly developed social skills and a submissive nature. Physical appearance does appear to play a role, which includes facial and dental appearance, although these tend not to be primary factors. Teasing related to dental appearance appears to be particularly hurtful. There is little evidence of a marked increase in self-esteem following orthodontic treatment in children, but in adults following treatment there is an improvement of body concept. The long-term psychological benefits of orthodontic treatment are difficult to measure but there is an increasing awareness of malocclusion with age.

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**Clinical Relevance:** Malocclusion may play a part in a child being persistently bullied, but such children may also represent a certain psychological type.

Every practitioner at some stage will be faced with the ‘goofy child’ or child with ‘fangs’, who is being bullied or teased at school. The parents will often be very keen for orthodontic treatment to be carried out as a matter of urgency as they feel this will be the answer to all their child’s problems, but is this the case? Is bullying or teasing directly related to certain types of malocclusion? If so, will correction of tooth malposition result in cessation of the bullying and an improvement in the child’s self-esteem?

## BULLYING

Bullying among school-age children is

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endemic. Up to 21% of children have reported being bullied,<sup>1</sup> while about 10% can be classified as being extremely victimized.<sup>2</sup> These tend to fall into two main categories:

- passive or low-aggressive victims, who almost never behave aggressively;
- provocative or high-aggressive victims, who tend to be highly aggressive and provoke the attacks of others.<sup>2</sup>

Victimization and bullying can lead to feelings of depression, loneliness, anxiety and low self-esteem.<sup>3</sup> Boys tend to be more exposed to direct physical bullying than girls, but both sexes are likely to face indirect bullying, such as social isolation.<sup>4,5</sup> The exposure to direct violence tends to decline with age, while being the target of verbal abuse tends to remain the same,<sup>2</sup> although younger

children tend to be bullied more commonly by older children.<sup>1,4</sup>

In terms of physical characteristics, it has been found that victims tend to be rated as less attractive than children who are not subjected to bullying, and have more odd mannerisms or physical disabilities.<sup>6</sup> In other research, however, physical features were found to be unimportant, the only external features associated with bullying being that the victims tended to be smaller and weaker than their peers.<sup>7,8</sup>

Regarding their personalities, victims tend to be anxious and insecure with low self-esteem.<sup>8</sup> They also have depressive tendencies that persist into adolescence and early adulthood, even after victimization has stopped.<sup>8</sup> This can lead to underachievement at school,<sup>7</sup> internalization of behaviour and psychosomatic symptoms.<sup>9</sup> Bullied children also tend to adopt a more submissive role in social interaction, being non-assertive, and rarely initiate prosocial behaviour.<sup>10</sup> They tend to lack social skill, and show little interest in the well-being of others.<sup>6</sup> These traits may result from, or be exacerbated by, the victimization, but there is evidence that they play a role in the initial instigation of the bullying,<sup>10</sup> and may be influenced by social background and parenting.<sup>4,6</sup>

There is also a tendency for children who are victims to remain victims, even when the social situation changes, such as moving school, which gives further evidence to the existence of a ‘victim type’.<sup>11</sup> The children doing the bullying also seem to have significantly more psychiatric symptoms than other children, and to be psychologically disturbed.<sup>4</sup>

## DENTOFACIAL CHARACTERISTICS AND BULLYING

The social and psychological influence of dental and facial appearance have been reported to have an important influence on people's perception of friendliness, social class, popularity and intelligence of an individual,<sup>12</sup> although this is not always well defined in real life.<sup>13</sup> The most salient feature in one study was the protrusion of the upper teeth,<sup>14</sup> although background facial attractiveness appears to be more influential than the individual's dental condition. The importance of dental appearance to an individual does not seem to be influenced by social background or education, although the realization of dental correction of 'crooked teeth' is.<sup>15</sup>

The appearance of the teeth appears to rank as a high priority for both males and females, transcending sexual stereotyping.<sup>16</sup> There is also an association between an individual's concepts of body image and low self-esteem. In relation to malocclusion, this tends to persist beyond childhood into adulthood.<sup>17</sup> Ironically, it appears that milder deviations in facial form, such as 'buck teeth', that tend to evoke ridicule and teasing, can be more damaging psychologically than the more severe deformities that tend to elicit strong emotional reactions such as pity or revulsion.<sup>18</sup> A further problem with facial and dental deformity is that in social interaction it is invariably impossible to hide or disguise it, because in normal interaction the eyes attend the face.<sup>18</sup>

In schoolchildren, deviations of dental appearance have been found to be a target for teasing, although the group of children to whom this applied was also found to be at a higher risk of harassment generally.<sup>19</sup> The greater the deviation of the dental appearance, the greater the implication to the child,<sup>19</sup> and comments about teeth appeared to be more hurtful than those about other features.<sup>19</sup> Height and weight were found to be the most common targets for teasing, although the same study gauged the influence of malocclusion

and orthodontic appliances on children's perception of facial appearance. It was found that fixed appliances attracted most frequent comment and that nicknaming, including 'metal mouth' and 'scaffolding', resulted. Ironically, perfectly aligned teeth also attracted nicknames in the study.

Other work has looked at a group of patients with a Class II division 1 malocclusion who had undergone early treatment to correct their 'goofy teeth'. That study found that these patients did not generally present for treatment with low self-concept and, on average, self-concept did not improve during the brief period of early orthodontic treatment.<sup>20</sup> In another study on schoolchildren undergoing orthodontic treatment, fixed appliances were found to attract more negative comments from both patients and parents than removable appliances, and parents had significantly more negative perceptions of both appliance types than the patient group.<sup>21</sup> Fixed appliances were also found to attract more teasing.

## BULLYING AND THE NEED FOR ORTHODONTIC TREATMENT

Is bullying or teasing therefore an important motive in seeking orthodontic treatment? One study found that, in a group of adolescents awaiting orthodontic treatment, less than 15% reported teasing as a frequent occurrence.<sup>22</sup> The main motivating factor for treatment appears to be the parents (and most especially the mother<sup>22</sup>), but the characteristics of the child and his/her relationship with the parents appears to determine how he/she reacts in the treatment setting.<sup>23</sup>

The benefits of orthodontics for an improvement in body image have been documented for an adult population<sup>24</sup> but in children, although there is usually an improvement in self-evaluation of dental-facial attractiveness with orthodontic treatment,<sup>25</sup> it does not appear to improve overall body image, self-concept or self-esteem.<sup>20,25-27</sup> In another

study, however, a group of patients followed from their adolescence into adulthood, who had not received orthodontic treatment, showed that awareness of malocclusion increases with age.<sup>17</sup> Dissatisfaction and teasing were experienced particularly by subjects with extreme overjets, extreme overbites and space anomalies, all of which are easier to treat in the growing patient. It has also been shown that students with malocclusion who had not received orthodontic treatment have a lower achievement motivation than students who have received treatment.<sup>28</sup> This may indicate the role of status-seeking as a motive for orthodontic treatment, which is also affected by socio-economic factors.<sup>15,23</sup> A child's psychological profile may influence treatment demand, as those with high self-esteem initially appear more likely to seek improvement of their teeth.<sup>27</sup>

## CONCLUSION

It appears that, although malocclusion may play a part in a child being bullied at school, the persistently bullied child represents a certain psychological type. Physical attractiveness plays a role in the creation of the victimized child and this would certainly seem to include facial and dental features. The benefits of orthodontic treatment in children are difficult to quantify in psychological terms, but these benefits become apparent in adulthood, as awareness of malocclusion increases with age. It is therefore probable that, by treating the 'goofy' child, we are helping to create a psychologically healthier adult with a better body image. The guidelines produced by the British Psychological Society on clinical psychology in dentistry estimates, from the work available and the epidemiology of psychological disorders in children, that about 10% of children with malocclusions would have significant anxieties or other emotional or behavioural problems.<sup>29</sup>

Further work needs to be done in this area, but it is important that each case is treated individually and on its

own merits as the psychological impact of bullying, whatever the cause, can be devastating for a child and have long-lasting effects.

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ABSTRACTS

ALWAYS READ THE INSTRUCTIONS

Relationship Between Adhesive Thickness and Microtensile Bond Strength. L. Zheng, P.N.R. Pereira, M. Nakajima, H. Sano and J. Tagami. *Operative Dentistry* 2001; **26**: 97–104.

These workers showed how the effect of the thickness of the adhesive layer on bond strength is dependent on the specific adhesive system being used. Carefully following the manufacturer's instructions resulted in acceptable bond strengths. However, when excess layers of a single-bottle adhesive, which contains water and ethanol, were applied the bond strength fell. These volatile solvents are necessary to facilitate the spread and penetration of the adhesive into the dentine surfaces, and they should be removed by gentle air-drying. The authors speculate that, if a thick layer of resin is applied, the volatile agents deep in the

material cannot escape, and the bond is significantly weakened. Conversely, thicker layers of adhesive resins without these volatile substances actually increased the bond strength, probably owing to improved stress distribution.

Particular care should be taken to avoid excess adhesive resin at line angles in cavities bonded with single bottle systems that contain water and ethanol.

DO YOU BELIEVE CHILDREN WHO SAY 'IT HURTS'?

Effectiveness of Local Anaesthesia in Pediatric Dental Practice. Y. Nakai, P. Milgrom, L. Mancl, S.E. Coldwell, P.K. Domoto and D.S. Ramsay. *Journal of the American Dental Association* 2000; **131**: 1699–1703.

The authors observed 361 children in 17 paediatric dental practices undergoing both restorative and surgical dental treatment. The mean age was 7 years 3 months, and 50.1% were girls. Each child

was assessed for anxiety about the local anaesthetic, and the efficacy of the pain control.

Rating of the child's pain was carried out using a sound, eye and motor (SEM) scale. It was observed that 11.6% of the children experienced ineffective pain control, and this was significantly influenced by the child's state preceding the injection. Children who were anxious, who had symptoms before treatment, and who underwent more invasive operative and endodontic treatment were more likely to experience ineffective pain control. After treatment was completed, the operating dentist was asked for an assessment of the level of anaesthesia, and these observations were compared with those of the observers.

It is concluded that the incidence of ineffective pain control may be less if clinicians use methods to reduce anxiety and perioperative infection and symptoms.

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