Children's Perception of, and Attitude Towards, Unfamiliar Peers with Facial Port-Wine Stains

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Received March 22, 1996; accepted December 26, 1996

Evaluated children's perception of, and attitude towards, unfamiliar peers with facial port-wine stains (PWS). Participants (ages 8 to 11 years) from three grades were shown videoclips of the same 6 children, 3 of whom (2 girls and 1 boy) were seen with a (fake) PWS by participants from one grade. Participants from different grades saw a different 1 of these 3 children with a PWS. Participants thought PWS would attract staring and teasing; for the boy it would cause self-pity and, for one of the girls, it would make getting a boyfriend more difficult, but the stain did not significantly affect participants' assessment of the attractiveness and character or willingness to interact/become friendly with the children on the video. Possible reasons for this discrepancy are discussed.

KEY WORDS: port-wine stain; facial disfigurement; attitudes; prejudice.

Physical, particularly facial, attractiveness is an important factor in interpersonal perception and interaction. Attractive individuals are often assumed to possess positive qualities (e.g., friendliness) and tend to be treated more positively by others while unattractive individuals are viewed negatively, indicative of a

1The authors are very grateful for the comments of the external reviewers and Dennis Drotar on earlier versions of this manuscript.

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“beauty-is-good” stereotype (Alley & Hildebrandt, 1988). Unattractive children may be discriminated against by adults from early in life (Ritter, Casey, & Langlois, 1991) and by other children at school (Langlois, 1986) and are more likely to be bullied by their peers (Lowenstein, 1978), a prejudice that is likely to impair psychological development (Langlois, 1986).

Research (Siller, 1986) and clinical experience (Bradbury, 1993) suggest that prejudice against individuals with facial disfigurements may be greater. A common facial disfigurement is that of port-wine stains (PWS) which are benign vascular nevi consisting of ectatic dermal blood vessels, most of which are on the head and neck (Lanigan, 1991). Estimates of the incidence of PWS vary between 1 in 300 live births (Jacobs & Walton, 1976) and 1 in 3,000 (Sheerin, MacLeod, & Kusumakar, 1995). Adults with PWS complain of how they are treated by others (Lanigan, 1991) and, in particular, of being subordinated, pitied, and ignored (Bull, 1990). There is some direct observational evidence that people physically avoid actors with fake facial PWS (Rumsey, Bull, & Gahagan, 1982). Clinical experience (Gerrard, 1991) indicates that children with PWS can be discriminated against by their peers. Evidence from a study using line drawings suggests that children with facial disfigurements similar to PWS are less liked by their peers than children with a physical disability (Richardson, 1971). Contrary to expectations, therefore, a recent study (Sheerin et al., 1995) found that the average self- and parent-reported psychological adjustment of a group of 7- to 15-year-old children (mean age = 11) with PWS was normal or better than normal. The authors wondered if this was due to an overcompensation process involving the use of psychological defenses but children with PWS may actually face less prejudice than expected.

To provide more information concerning the nature and degree of prejudice that children with PWS may experience from their peers, videoclips of children with and without PWS were shown to child participants who rated them along various dimensions.

Negative attitudes appear to be held by adults towards people with a variety of conditions such as cerebral palsy and cosmetic conditions, including an uneasiness in interaction (resulting in a reluctance to interact with them), rejection of intimacy/friendship, and the attribution of negative characteristics (such as stupidity) (Siller, 1986). Similar attitudes towards peers with handicaps appear to be well established in children by 8 years of age (Rosenbaum, Armstrong, & King, 1986). Research with children with facial disfigurements indicates the greater the disfigurement the less happy, clever, and friendly the child is expected to be by others (Lansdown, Lloyd, & Hunter, 1991). It was, therefore, predicted that the children who participated in this study would have similar expectations of, and attitudes towards, children with PWS in the videoclips.

There is also some evidence (Rosenbaum et al., 1986) that girls may hold
more positive attitudes towards children with handicaps although this may not apply to children with facial disfigurements (Richardson, 1971). For this reason the gender of the participants was studied. Children of the same age as the current study participants tend to have more positive views of peers of the same gender (Cross & Cross, 1971; Styczynski & Langlois, 1977) and there is little cross-gender peer interaction in this age group (Gottman, 1985). It was predicted that participants would rate the character and attractiveness more positively, and would be more willing to interact/become friendly with, children of the same gender in the videoclips. This allowed some assessment of the discriminant validity of the measures used in the study to assess these attitudes.

Adults with PWS report that during childhood the stain attracted attention and teasing (Malm & Calberg, 1988) and believe that the PWS makes it more difficult to attract potential sexual partners (Lanigan, 1991). Furthermore, people with a variety of disabilities or disfigurements are expected by others to be self-pitying (Siller, Vann, Ferguson, & Holland, 1967). Participants’ views on these issues were therefore assessed. It was predicted that participants would expect the stain to attract teasing and staring, cause self-pity, and make it more difficult to get a partner.

MATERIALS AND METHOD

Participants

Participants ages 8 to 11 years were drawn from three school years (Grades 4, 5, and 6) from a state primary/elementary school serving the local community, by which age children appear have relatively stable and coherent attitudes towards children with handicaps (Rosenbaum et al., 1986). The school was situated in an economically deprived area of a large city in which 99% of residents are white, 29% are unemployed, and 12% of families are single-parent (1991 Census). The average unemployment rate for the city as a whole is 23% with 9% of families being single-parent. The school contains only a few children with mild disabilities and learning difficulties, and no formal lessons are held to try to reduce prejudice against others. Although there is some evidence that attitudes towards peers with disfigurements varies with age (Richardson, 1971), for logistical and practical reasons it was not possible to put participants into three groups counterbalanced for age. These three consecutive grades were therefore chosen to minimize the effect of development on responses to children with PWS in the videoclips. Participants were given a letter of consent to take home to their parents which explained that the purpose of the study was to examine the importance of physical appearance in the perception of children by their peers. None of
the participants' parents indicated they did not wish their child(ren) to take part in the study. Ten percent of potential participants were absent on the day the study was carried out.

Videoclips

Head and shoulder videoclips, lasting about 10–15 seconds, were made of six white children. Child 1 was female age 11 years, Child 2 was female age 10 years, Child 3 was male age 7 years, Child 4 was female age 10 years, Child 5 was male age 10 years, and Child 6 was female age 9 years. The child began by smiling into the camera. S/he then turned her/his head to show both profiles, looked into the camera, introduced her/himself by name and then smiled. All participants saw the same videoclip of Children 1, 5, and 6 none of whom had a PWS in the clip. One of three children (2, 3, or 4) was seen by participants from different grades with a false PWS. To maximize the possibility of detecting prejudice a large, obvious stain (covering most of the left cheek and stretching from the mouth to just below the eye) was applied using face paints. Children seen with and without a PWS by participants in different grades had the same hairstyle, clothes, and so forth in both videoclips and were filmed against the same background. The order in which the videoclips were shown to the participants was determined randomly with the proviso that the first videoclip should be of a child without a PWS. Thus all participants saw the same children in the same order on the videoclips, however, for each grade a different one of the six children had a PWS.

Questionnaire Design

The questionnaire used to assess children's perception of, and attitude towards, children with and without PWS was devised specifically for this study. Participants indicated on a 5-point scale (agree a lot to disagree a lot) their response to each item which was scored 0 to 4. High scores indicated a positive response to the child in the video. Seven items attempted to assess participants' willingness to interact/become friendly with the children whose pictures they saw. These were, "I would be happy to play with this child," "I wouldn't know what to say to this child," "I would be afraid of this child," "I would be happy to have this child as a special friend," "I wouldn't want to sit next to this child in class," "I would try and stay away from this child," and "I would be scared to look this child straight in the face." The first six of these items were adapted from the Chedoke-McMaster Attitudes towards Children with Handicaps scale (CATCH; Rosenbaum et al., 1986). The last of these items was adapted from the Interactions with Disabled Persons scale (IDP; Gething, 1991). Scores from these seven
items were combined (unweighted) to provide an overall measure. Three items were designed to assess the extent to which participants thought that the children in the videoclips would possess positive characteristics. These were “This child would be friendly,” “This child would be clever,” and “This child would be happy a lot of the time.” These items were adapted from a study by Lansdown et al. (1991). Again scores on these items were combined (unweighted) to provide an overall measure. A further set of four individual items assessed specific beliefs about the children in the video. These were: “This child would get teased a lot about the way he (or she) looks,” “This child would get stared at a lot,” “This child would feel sorry for herself (or himself),” and “This child would find it easy to get a girlfriend (or boyfriend).” At the end of the questionnaire was a 10-point visual analog scale for participants to rate the attractiveness of the children on video, anchored by the statements “Not at all good looking” and “Very good looking.”

**Practice Questionnaire**

A questionnaire was developed to teach participants how to complete questionnaires and evaluate their ability to do so. Participants indicated on a 5-point scale (agree a lot to disagree a lot) their response to a number of items. Some items (e.g., “I will get presents at Christmas”) had obvious answers while others (e.g., “It will rain tomorrow”) were expected to produce a variety of responses. Two factual items were included (“boys grow up to be men” and “girls grow up to be men”). Only data obtained from participants who indicated that they agreed with the first of these statements and disagreed with the second were analyzed. Also included were four 10-point visual analog scales anchored by the words “weak” and “strong.” To encourage participants to use the full range of the scale participants completed these scales in relation to Superman®, a baby, women, and men.

**Data Analyses**

The following measures were analyzed by separate three-way repeated measures ANOVAs: The four individual items from the questionnaire, attractiveness ratings, overall willingness to interact/become friendly with the children in the videopictures, and overall assessment of their character. The three factors were Child (in the videopicture, the repeated measures factor), Gender (of the participants), and Grade (of the participants). Child × Gender interactions were of interest. It was predicted that, other than for the individual items, boy participants would be more positive about boys in the videoclips than would girl participants and vice versa for girls in the videoclips. These comparisons allowed
some assessment of the discriminant validity of the measures used. Child \times Grade interactions were of primary interest since it was expected that participants who saw children in the videoclips with PWS would respond to them differently than would participants who saw them without the PWS.

Significant findings were further explored using univariate F tests (tests of effects) and post hoc tests (Tukey's test). For Child \times Grade interactions it was expected that there would be a significant univariate effect of Grade for children in the videoclips who were seen with and without PWS by different participants. Responses to children with PWS were expected to be less favorable. The extent to which participants agreed in their rating of the attractiveness of children in the videoclips was analyzed using Kendall coefficients of concordance (estimates of the average correlation among participants' ratings) as has been used previously (e.g., Cavior & Dokecki, 1973). Three separate analyses were performed as each grade saw a different child with a PWS and it was expected that the stain would lower the child's attractiveness rank. In light of the number of analyses performed a p value of .01 was taken to indicate statistical significance.

Procedure

Participants took part in the experiment in their normal classrooms. Two to three classes from each grade were shown the same series of videoclips and the procedure followed was based on written guidelines so as to be consistent for each class. Participants were provided with a booklet of seven questionnaires, the first being the practice questionnaire. The other six questionnaires were identical except that each had a different number at the top which referred to the number of the particular child in the videoclip and the wording of particular items reflected the gender of the child in the videoclip. Each item was then read out to the participants and they noted their response on the questionnaire. The 10-point visual analog scale was explained to the participants in relation to the first such item ("Superman® is" "weak" to "strong") who then completed the three other items using this scale. Participants were told "I am going to show you pictures of a number of children on video. I want to know what you think each child would be like. There are no right or wrong answers. I simply want to know what you think they would be like." These latter points were emphasized throughout the procedure and participants were instructed not to discuss the children on the videoclips with each other. Each clip was preceded by a blank television screen except for the words "picture number . . .". The picture of the child was paused at the end of each clip and remained on the screen while the participants completed the appropriate questionnaire. For all clips each item on the questionnaire was read out to the participants. At the end of each clip participants were instructed to turn to the next questionnaire in the booklet and check that it
corresponded to the number of the child on the screen. The time taken to complete the whole procedure for the six videoclips varied from 40 minutes to an hour.

RESULTS

Usable Data. Only data obtained from participants who answered the two factual items in the practice questionnaire correctly were analyzed. For Grades 4, 5, and 6, respectively, this was 23 of 51 (45%), 38 of 56 (67.9%), and 35 of 41 (85.4%). Participants’ ability to reliably complete the questionnaires therefore increased with age. Failure to answer these items correctly probably reflected difficulties in using the scale, reading and/or remembering the item, or scanning the page to ensure the mark was made in the correct position rather than a lack of knowledge. Not all participants responded to every item in each questionnaire. Thus not all analyses were based on data obtained from all 96 participants, particularly the composite measures.

Interparticipant Agreement on the Attractiveness of the Children in the Videoclips. The Kendall coefficients of concordance for participants’ ratings of attractiveness were .23, .20, and .28 for Grades 4, 5, and 6, respectively (all ps < .001). Thus there was significant agreement between participants in their ranking of the attractiveness of the children in the videoclips.

Relationship Between Variables. Positive correlations between participants’ ratings of the attractiveness of the individual children in the videoclips and their willingness to interact/become friendly with them (varying from .30 to .55) were found (all ps < .006). For each child in the videoclips there was also a positive correlation between participants’ ratings of her/his attractiveness and character (of between .19 and .60) which were statistically significant (p < .003) for all but two children. Thus, the participants’ responses to the children in the videoclips were consistent across measures.

Reliability of the Scales Used to Assess Participants’ Willingness to Interact/Become Friendly with the Children in the Videoclips and Character Evaluations. The reliability of these scales was calculated in relation to participants’ responses to individual children in the videoclips. Alpha coefficients above .7 were obtained for the willingness to interact/become friendly scale and above .6 for the character assessment scale.

General Comments on the Repeated Measures ANOVAs. Seven measures were subjected to 3-way [Child (in the videoclip) × Gender (of the participants) × Grade (of the participants)] repeated measures ANOVAs; the 4 individual items from the questionnaire; assessments of character and attractiveness; and willingness to interact with the children on video. For none of these measures was there a significant Child × Grade × Gender interaction, largest F(10, 440)
= 1.81, \( p > .05 \), indicating that boy and girl participants did not differ significantly in their response to children with PWS. It was possible, therefore, to collapse across grade when considering Child \( \times \) Gender interactions and across gender when considering Child \( \times \) Grade interactions. For all of the measures there was a significant Child \( \times \) Gender and/or Child \( \times \) Grade interaction. Consequently, main effects of Child, Grade, and Gender are not reported.

**Gender Effects.** As predicted, the expected gender bias (as indicated by significant Gender \( \times \) Child interactions) was found on three of the measures. This effect was most pronounced (Table I) in the willingness of participants of different genders to interact/become friendly with different children in the videoclips, \( F(5, 330) = 17.621, \ p < .001 \). Male participants expressed greater willingness to interact/become friendly with the two boys in the videoclips than did the girl participants and vice versa for the girls in the videoclips. Significant Child \( \times \) Gender interactions were also found for participants’ ratings of the attractiveness and character of the children in the videoclips, smallest \( F(5, 390) = 3.29, \ p = .006 \). On both measures boy participants rated the boys in the videoclips more positively and, the girls less positively, than did girl participants.

**Effects of PWS on Participants’ Perception of an Attitude Towards Children in the Videoclips.** For all seven measures there was a significant Child \( \times \) Grade interaction, smallest \( F(10, 330) = 2.42, \ p = .009 \). Participants in different grades, therefore, responded differently to the children in the videoclips on these measures. These differences were explored using univariate \( F \) tests and post hoc tests.

**Expectation That PWS Would Attract Teasing.** Participants’ responses to the item “This child would get teased a lot about the way he/she looks” are shown in Table II. Univariate \( F \) tests indicated that there was a significant effect of Grade

<table>
<thead>
<tr>
<th>Table I. Influence of Gender on Willingness to Interact*</th>
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<tbody>
<tr>
<td>Child in videoclip</td>
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<tr>
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<tr>
<td><strong>Boys (n = 36)</strong></td>
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<td>( M )</td>
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<tr>
<td><strong>Girls (n = 36)</strong></td>
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<td>( M )</td>
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<td>( SE )</td>
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*Numbers are adjusted least square means and SEs. Higher values indicate a greater willingness to interact/become friendly with the child in the videoclip. F = female, M = male.

*Child was seen with a PWS by participants in one grade only.
Table II. Effects of PWS on Participants' Ratings of Likelihood of Being Teased

<table>
<thead>
<tr>
<th>Child in Videoclip</th>
<th>Participants</th>
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<tbody>
<tr>
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<td>Grade 4 (n = 17)</td>
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<tr>
<td>1 (F)</td>
<td>M 2.47 SE 0.30</td>
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<tr>
<td>2 (F)</td>
<td>M 2.72 SE 0.29</td>
</tr>
<tr>
<td>3 (M)</td>
<td>M 0.95* SE 0.28</td>
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<tr>
<td>4 (F)</td>
<td>M 3.18 SE 0.32</td>
</tr>
<tr>
<td>5 (M)</td>
<td>M 2.99 SE 0.30</td>
</tr>
<tr>
<td>6 (F)</td>
<td>M 2.96 SE 0.32</td>
</tr>
</tbody>
</table>

*Numbers are adjusted least square means and SEs. The larger the number the greater the disagreements with the statement "This child would get teased a lot about how he (or she) looks." (F) = female, (M) = male.
*Child had a PWS in the videoclip.

for all three children shown with a PWS, smallest $F(2,79) = 13.77, p < .001$. Post hoc tests indicated that participants who saw the child with a PWS were significantly more likely to think that the child would be teased about his/her appearance than participants who saw him/her without a stain (all $ps < .003$).

Expectation That PWS Would Attract Staring. For the item "This child would get stared at a lot" univariate $F$ tests indicated that there was a significant effect of grade, smallest $F(2, 86) = 13.02, p < .01$, for Children 3 and 4. Post hoc tests indicated that participants who saw these children with PWS thought they were significantly more likely to be stared at than participants who did not (all $ps < .005$). Participants in Grade 5 who saw Child 2 with a PWS thought she was more likely to be stared at than participants in other grades who saw her without the stain but this difference did not reach statistical significance. There was also a significant univariate effect of grade for Child 1, $F(2, 86) = 6.88, p = .002$, participants in Grade 4 thinking she was significantly less likely to be stared at than participants in Grade 5 ($p = .002$). For no other child was there a significant univariate effect of grade.
Expectation That PWS Would Affect the Ability to Get a Girlfriend or Boyfriend. Only for Child 4 did the presence of the PWS significantly affect participants' views on her ability to get a boyfriend, $F(2, 88) = 6.7, p = .002$. Participants in Grade 6 who saw her with a PWS thought she was less likely to get a boyfriend than participants who saw her without the stain (both $p < .008$). For the children seen by all participants without a PWS there was no univariate effect of grade.

Expectation That PWS Would Cause Self-Pity. Participants who saw the boy (Child 3) with PWS thought it was more likely that he would feel sorry for himself, $F(2, 88) = 6.37, p < .01$. This effect was not significant for the two girls. For the children seen without a PWS by all participants there was no significant univariate effect of grade.

Effect of PWS on Willingness to Interact/Become Friendly with the Children in the Videoclips. Although the Child (in the videoclip) $\times$ Grade (of participants) interaction was significant in the overall ANOVA for no child was there a significant univariate effect of grade.

Effect of PWS on Attractiveness Ratings. The presence of the PWS did not result in significantly lower attractiveness ratings.

Effect of PWS on Character (Happiness, Friendliness, and Intelligence) Ratings. The characters of the two girls in the videoclips with PWS were not rated significantly differently by participants who saw them with the stain. Although there was a significant effect of grade, $F(2, 78) = 5.2, p = .008$, for Child 3 this was not related to the presence of the PWS. His character was rated more positively by participants from Grade 4 (who saw him with a stain) and Grade 5 (who saw him without a stain) than Grade 6 (who also saw him without a stain). For the children seen without a PWS by all participants there was no significant univariate effect of grade.

DISCUSSION

Before discussing the findings of the study it is important to consider the characteristics and validity of the technique used here to assess the response of others to PWS. Because other characteristics can be held constant this method allows the effect of the PWS per se to be isolated, in contrast to other methods (Richardson, 1971). As such, the technique could also be used to assess the effects of such factors as the size, color, and the position of the stain on the response of others. What the child does and says in the videoclip could also be varied in order to assess the effect of such changes on the attributions made by others. The items contained within the questionnaire could also be varied to allow the attributions made by others to be explored in more detail. In addition, the technique could be used to assess the response of others to, for example,
children who have lost their hair following treatment for cancer and children with some physical disabilities. Thus, children could be filmed in and out of wheelchairs. It remains to be determined whether or not prejudice expressed on the questionnaire is also expressed behaviorally. Further studies are planned to address this question.

Although it would be possible to observe children with actual PWS during interaction with unfamiliar peers to try to assess the response of others it may be difficult to isolate the precise effects of the stain per se on such interactions. For example, children with PWS may be more self-conscious with unfamiliar peers which may influence the interaction. Clearly the technique assesses children's initial response to unfamiliar peers with PWS and it could be argued that any prejudice detected may be easily overcome during repeated social interaction. However, the initial impression formed about an individual may have enduring impact for a number of reasons (Alley & Hildebrandt, 1988). These include the fleeting nature of many social interactions (thus misconceptions cannot be corrected), the likelihood of information being distorted to fit early impressions, and the avoidance of individuals perceived to be unattractive thereby making social contact less likely. It might also be argued that the participants could tell that the PWS were fake which influenced their responses. Although this possibility cannot be completely discounted, false PWS have been used in behavioral observation studies which required face-to-face contact with members of the public (Rumsey et al., 1982).

The expected effect of the gender of the participants on the perception of, and attitude towards, children of different genders in the videoclips was realized. Boys were more willing to interact/become friendly with the boys they saw on video than were the girl participants and vice versa for the girls on video. Consistent with these findings, friendships and interactions between children of primary (elementary) school age are extremely gender oriented (Gottman, 1985). The gender bias noted in terms of participants' ratings of the attractiveness of the children they saw on video has also been found previously (Cross & Cross, 1971). The effect of gender on the participants' assessment of the characteristics (intelligence, friendliness, and happiness) of the children seen on video was also expected. Participants clearly discriminated between children in the videoclips on the basis of gender.

The positive (and usually statistically significant) relationship between participants ratings of the attractiveness of the children in the videoclips and assessments of their character and willingness to interact/become friendly with them also indicates that participants were consistent in their responses to the children on video.

Participants agreed concerning the attractiveness rankings of the children in the videos. The degree of agreement found was somewhat lower than that obtained in a previous study of 10- to 12-year-old children (Cavior & Dokecki,
which used the same statistical technique to assess interparticipant agreement in rating the attractiveness of a series of photographs of unfamiliar peers. This discrepancy is possibly due to differences in the size of the sample of children rated for attractiveness since the use of a large number of pictures of children is likely to sample a wide range of attractiveness. The variability in attractiveness in the sample of six children used here was limited and possibly resulted in lower levels of interparticipant agreement.

Participants clearly discriminated between children in the videoclips on the basis of the PWS. They thought that such stains would attract teasing and staring, and for one of the girls, make it more difficult to get a boyfriend. These expectations are consistent with the reports of adults with PWS of their experiences during childhood and beyond (Lanigan, 1991; Malm & Calberg, 1988). Such experiences would be expected to have some psychological impact on the individual. Thus, although children frequently tease each other, particularly about the way they look (Shaw, 1988), such teasing usually causes distress even though it may not be meant to do so (Shapiro, Baumeister, & Kessler, 1991).

Clinical experience also suggests that children with facial disfigurements who are subject to chronic teasing can become withdrawn and depressed (Ger- rard, 1991). Similarly, adults with PWS report that they find being stared at hurtful (Lanigan, 1991). In addition, self-perception of one's ability to attract potential sexual partners is an important aspect of self-esteem during adolescence (Harter, 1990). Sheerin et al. (1995) found a rapid decline in self-rated physical appearance from childhood to adolescence in girls with PWS. This decline is possibly related to the increasing psychological importance of being able to attract potential partners and an awareness of the importance of physical appearance in being able to do so. There would, in particular, appear to be a strong reluctance to marry a person with a disability (Siller, 1986). Participants also expected the boy seen with a PWS to feel self-pity. Similar expectations are held by adults about individuals with disfigurements (Siller et al., 1967) and by children about peers with handicaps (Rosenbaum et al., 1986). Siller et al. (1967) argued that such inferred emotional consequences of disability/disfigurement are essentially hostile and believing that someone is self-pitying may be linked with the attribution of other negative traits such as bitterness and hypersensitivity.

The results are less clear-cut for the effect of PWS on the other measures. Although participants' tended to rate the attractiveness and character of the girls with PWS less positively and were less willing to interact/become friendly with them these effects were not statistically significant. The results are not indicative of gross prejudice against girls with PWS.

For the boy in the videoclips (Child 3) who was seen by participants in one grade with a PWS, the presence of the stain clearly did not result in him being seen as less attractive, or as having fewer positive characteristics, nor were
participants less willing to interact/become friendly with him. There are a num-
ber of possible explanations for this discrepancy. Most obviously, the reaction to
male and female with PWS may be different. Girls' treatment by their peers
appears to be linked to their attractiveness whereas boys' treatment is not, and
facial disfigurement has less of an impact on perception of men's than women's
faces (Alley & Hildebrandt, 1988). Although PWS occur equally frequently in
both genders, the majority of children referred for treatment appear to be girls
(Sheerin et al., 1995). This suggests that either the children, their parents, or
professionals are more concerned about the effect of PWS on girls than on boys.

A second possibility relates to the fact that this child was seen with a PWS
by the youngest participants (Grade 4). This may have been important for a
number of reasons. First, there is evidence (Richardson, 1971) that prejudice
against facial disfigurements increases with age. Second, usable data was only
provided by 45% of participants from this particular grade, presumably the more
able ones. Subsequent grades provided a higher percentage of usable question-
naires and so it was likely that children with a wider range of abilities were
included. Younger, more able students may be more benevolent in their assess-
ment of others. These factors may also have accounted for the different pattern of
results for the boy seen in the videoclips with a PWS compared to the girls.

Participants clearly expected that children with PWS would get teased a lot
about the way they looked. This contrasts somewhat with the finding that partici-
pants were not less willing to interact/become friendly with children with PWS.
People seem to be reluctant to admit to feelings of prejudice against individuals
with a disability or disfigurement (Gething, 1991; Siller, 1986). As each item
used to assess participants' willingness to interact become friendly with the
children in the videoclip began with "I would . . . " it is possible that the
participants were somewhat reluctant to express their own prejudice but recog-
nized it would occur. Alternately participants' responses may have been truthful
which may account for lack of evidence of poor self- and parent-reported psycho-
social adjustment in children with PWS (Sheerin et al., 1995).

Sheerin et al. (1995) have argued that the equation "PWS child = unattrac-
tive child" is mistaken and the results of this study lend some support to this
argument. Thus, the presence of the PWS did not significantly reduce the attract-
viness ratings of the children in the video. Furthermore, participants who saw
Child 4 without a PWS tended to rate her as being the most or next to most
attractive of all the children. Although the PWS reduced her perceived level of
attractiveness she was rated as being more attractive than three other children in
the videoclips, including one of the girls. This suggests that PWS are seen
against a "background" of other aspects of the child's physical appearance which
are taken into account when coming to a judgment concerning an individuals'
attractiveness. The proportion of the face occupied by different facial features
and the relationship between these features are important in judgments of attrac-
tiveness whilst isolated facial features (such as eyes) can also be rated for attractiveness with reasonable interrater agreement (Alley & Hildebrandt, 1988). These aspects may continue to be taken into account when assessing the attractiveness of someone with a PWS rather than being "overwhelmed" by the stain as also appears to be the case for dental abnormalities (Shaw, 1988).

The results of this study should not be taken as contrary to the calls that have been made for the necessity of treatment of PWS (Wagner & Wagner, 1990). First, prejudice against children with PWS may be greater than participants were willing to admit. Second, there is evidence that prejudice against children with facial disfigurements, particularly by girls, increases with age (Richardson, 1971). Third, the prejudice shown against children with PWS may be quite subtle and specific. Thus, a child may be happy to have peer with a PWS as a friend and go with her/him to the swimming baths. She or he may not, however, be willing to use the same towel afterwards because of the stain. Sheerin et al. (1995) suspect that adolescents and adults with PWS have subtle interpersonal difficulties and problems with psychological adjustment. It would be useful to document such difficulties in future research.

REFERENCES


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