

# Development and validation of the Brazilian Version of Lay Persons' Social Judgements about Cleft-lip Scale (B-LSojCleft-S)

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**Abstract:** The aim of this study was to develop and analyze the psychometric properties of the Brazilian Version of Lay Person's Social Judgement about Cleft-lip Scale (B-LSojCleft-S). A standardized photograph of a 16-year-old girl was manipulated by using photo editing software, to simulate different cleft-lip situations. The cleft-free image was used as a control. The researchers structured an initial questionnaire that was evaluated by experts and a sample of the target population to evaluate the construct. After analysis by the researchers, a final version of the B-LSojCleft-S containing 14 items was generated. Each answer was awarded score from 1 to 3 points, yielding a total score of 14 to 42 points. Higher scores represented better social judgements. The B-LSojCleft-S was applied online to 103 test participants and 73 retest participants with an interval of 20 days between application. Aspects of acceptability, discriminant property, internal consistency, reliability and construct validity were evaluated. Construct validity was assessed using the Friedman test ( $p < 0.05$ ). Reliability was determined using an intraclass correlation coefficient  $> 0.70$ , and internal consistency using Cronbach's alpha  $> 0.81$ . The B-LSojCleft-S showed high acceptability, strong discriminant property, excellent internal consistency and reliability, but had a floor and ceiling effect. The instrument reached valid and reliable scores and had acceptable psychometric properties to evaluate the social judgments of lay persons about different cleft lip situations in a Brazilian population.

**Keywords:** Cleft Lip; Validation Study; Psychometrics; Adolescent.

## Introduction

Cleft lip and palate are the most common congenital anomalies of the face and are among the most common craniofacial alterations.<sup>1</sup> It is estimated that 1 in 730 individuals are born with this condition in low- and middle-income countries.<sup>2</sup> The etiology of orofacial clefts has been correlated with environmental factors and genetic influence.<sup>3</sup> Clefts can be associated with syndromes or individuals may be affected by isolated clefts, the latter being the most prevalent group, representing about 70% of cases of cleft lip and palate.<sup>3</sup>



The presence of cleft lip and/or palate increases the chances of dental anomalies<sup>4</sup> in addition to difficulties with phonation, problems with swallowing and nutrition, and hearing infections.<sup>5</sup> In the psychosocial context, people with clefts tend to have lower school performance, dissatisfaction with their appearance, low self-esteem and depressive symptoms, impairment of social skills, suffer stigmatization and bullying, with negative impacts on the quality of life.<sup>1,6,7</sup>

Perceptions and judgments of beauty, attractiveness and reliability are directly related to facial appearance and symmetry.<sup>8,9</sup> The first impressions of the face are sufficient to make social inferences about the fissures.<sup>10</sup> These judgments and inferences are not supported only by the appearance, but also by the conceptual beliefs of the observer.<sup>11</sup> Thus, the presence of cleft lip suggests social disadvantage,<sup>12</sup> since many cultural stigmas about cleft lips persist even today. For example, the etiology of the fissures is attributed to social beliefs about "God's will", supernatural forces, witchery, social isolation, family rejection, difficulty and/or deprivation of access to school education, fewer job opportunities and marriage options.<sup>13</sup>

Despite the evidence on the biopsychosocial consequences of cleft lips,<sup>5-7,12,13</sup> there is still no instrument in the literature with validated measurement properties that assess the influence of cleft lip on social judgments of lay persons. From this perspective, evaluating the judgment suffered by this population of persons with unrepaired cleft lips, even today, can enhance the need to implement effective public policies that minimize the social stigmas about clefts. Therefore, this study aimed to develop and assess the psychometric properties of the Brazilian Version of Lay persons' Social Judgment about Cleft-lip Scale (B-LSojCleft-S).

## Methodology

### Study design, population and ethical considerations

This was a cross-sectional study, in which data were collected online by using a questionnaire

on the Survey Monkey platform (San Mateo, USA). with the aim of building and analyzing the psychometric properties of the Brazilian Version of Lay Persons' Social Judgment about Cleft-lip Scale (B-LSojCleft-S). For this purpose, lay persons, over 18 years of age, of both sexes and who were not visually impaired, were included. People who refused to sign the term of free and informed consent, dentists and cleft patients were excluded from the study. The study was approved by the Research Ethics Committee under case number 4,565,575. All participants signed a term of free and informed consent.

### Questionnaire validation

The process of construction and assessment of the psychometric properties of the instrument was divided into 7 phases: a) manipulation of the photographs, b) elaboration of the questionnaire, c) assessment of the questionnaire by dental professionals (oral and maxillofacial surgeons), d) assessment of the questionnaire by education professionals, e) assessment of the questionnaire by the target population, f) completion of the questionnaire and g) analysis of the psychometric properties and reliability of the questionnaire.

### Manipulation of photographs

A standardized, full-face color photograph of a 16-year-old adolescent was selected. The image was manipulated to develop the different types of cleft lip, according to the Spina<sup>14</sup> classification. The image without digital alteration was used as a control, in order to verify the reliability of the research participants' answers. Changes were made using image manipulation software (Photoshop CS6; Adobe Systems, San Jose, USA). A total of 9 images were used in the study (Figure).

### Structuring the questionnaire

An initial questionnaire, containing 13 questions, was designed in order to assess the social judgment in relation to the different types of cleft lip according to the standardized photographs. The aim of items contained in the questionnaire was to contemplate the constructs of the present study.



**Figure.** Image of the adolescent's face, which was used in the study, with A - incomplete right unilateral cleft lip; B - complete left unilateral cleft lip; C - incomplete bilateral cleft lip; D - incomplete median cleft lip; E - control image; F - complete bilateral cleft lip; G - complete right unilateral cleft lip; H - complete median cleft lip; I - incomplete left unilateral cleft lip.



### **Assessment of the questionnaire by dental professionals (oral and maxillofacial surgeons)**

Two oral and maxillofacial surgeons were invited to assess the questionnaire. A member of the team was responsible for delivering the questionnaire to these professionals for reading and assessing the technical content. They were instructed to make observations, make changes and suggestions, as well as point out possible gaps in the items constructed. Participants performed this stage individually and blindly. After that, the questionnaire with participants' considerations was assessed by the researchers and necessary changes were incorporated. The suggestions mentioned included clarifying the meaning of the word educated in the item (Do you consider this person educated), if it referred to good manners or to the educational level, facilitating its understanding by the target population. Another suggestion was the creation of an item that addressed the influence of financial issues on social judgment. To meet this demand, the following item was included in the questionnaire: Do you consider that this person has financial difficulties?

### **Assessment of the questionnaire by education professionals**

Two education professionals who work in the field of psychopedagogy and linguistics were instructed to assess the questionnaire and make suggestions and criticisms, taking into account the level of understanding, making it accessible to the audience for which the questionnaire was intended. This stage was also performed individually and according to the availability of time and place of each professional. One of the researchers of the team met the professional in person, explained the purpose of the questionnaire, described the population for whom it was intended, and the purpose of this stage within the process of development and validation of an instrument. After this stage, the questionnaire was reassessed by the researchers. The professionals indicated the need to improve the clarity of the item (Do you consider this person polite) for the target population by adding the

term good manners. The researchers accepted the suggestion and the wording of the item was corrected as follows: Do you consider this person polite (has good manners)? The participants were excluded from the main study.

### **Assessment of the questionnaire by the target population**

Before data collection, ten lay persons with the characteristics of the study population were recruited to analyze the questionnaire – that has previously been modified according to the suggestions provided by the dentistry and education professionals – regarding its content, understanding of the items and the response options. They were also encouraged to make suggestions and point out possible changes that they considered important on the topic evaluated. The stage was submitted to qualitative evaluation, and as saturation of considerations pointed out by the target population occurred, the process ended. All considerations were evaluated by the researchers and the only modification indicated by the target population was adding the word liquid after the word drink in the item: Do you think this person drinks well? After discussion, the research team decided that it was not necessary to incorporate it into the instrument, since this suggestion was not recurrent among the target population.

### **Completion of the questionnaire**

The suggestions and observations provided were incorporated into a consensus meeting among the researchers resulting in the addition of one more item, leaving the final version with 14 questions described below:

1. Do you consider this person happy?
2. Do you consider this person polite (has good manners)?
3. Do you consider this person smart?
4. Do you consider this person vain?
5. Do you consider that this person has good hygiene habits?
6. Do you consider that this person takes care of his/her health?
7. Do you consider that this person eats well?
8. Do you think this person drinks well?

9. Do you think this person speaks well?
10. Do you consider this person to be emotionally well resolved?
11. Do you consider this person shy?
12. Do you believe that this person has friends?
13. Do you believe that this person performs well in his/her school activities?
14. Do you think that this person has financial difficulties?

Each item of the questionnaire had three response options: “yes”, “maybe” and “no”. The questionnaire had 12 items with positive characteristics (“happy”, “polite”, “intelligent”, “vain”, “emotionally well resolved”, “has friends”, “eat well”, “drink well”, “speak well”, “take care of his health”, “good hygiene habits” and “well in school activities”) and 2 items with negative characteristics (“shy” and “financial difficulties”). For positive items, the answers “yes”, “maybe” and “no” received scores of 3, 2 and 1, respectively. For items with negative characteristics, they received inverse scores: “yes”, “maybe” and “no” scored 1, 2 and 3, respectively. The total score of the questionnaire was obtained by adding the scores attributed to all items, ranging from 14 to 42. Thus, the higher the score, the better was the judgment the participants had of the person in the image.

### Sample size and composition

The questionnaire consisted of fourteen closed questions and the literature suggests that at least 5 to 10 individuals per question should be included.<sup>15</sup> Thus, a sample of at least 70 participants was estimated as being the number needed for the present study.

### Reliability and psychometric properties of the questionnaire

The questionnaire was applied at two different periods of time with an interval of 20 days between each application (test and retest) using the Survey Monkey software. The first period consisted of the application of the questionnaire to 103 participants and the retest was performed with 73 participants who were randomly chosen. The data collection period was from June to August 2021. All participants received an invitation to participate in the study by means of a link to access the questionnaire through

the WhatsApp application (Melon Park, California, USA). Before starting the research, the participants had access to the term of free and informed consent form, and a copy was made available by e-mail. The numerical value of the participants’ answers was tabulated in Microsoft Excel 2010 (São Paulo, São Paulo, Brazil).

### Statistical analysis

#### Psychometric properties

Acceptability was assessed according to the proportion of individuals who did not respond to all items in the instrument. The presence of the floor and ceiling effect was assessed by analyzing the frequency of responses in each item. The floor effect occurred when over 15% of the responses were concentrated in the minimum value, while the ceiling effect referred to the same occurrence in the maximum value.<sup>16</sup>

Construct validity was investigated using the known groups test, by comparing the control image and the images of the different cleft lips, using the Friedman test, and the pairwise comparisons adjusted by the Bonferroni test. The significance level adopted was 5%.

Reliability was assessed by measurement error, according to the temporal stability criterion, that is, it was determined by the agreement between repeated measures (test-retest) using the intraclass correlation coefficient (ICC) and internal consistency (Cronbach’s alpha) and McDonald’s omega). Evidence of internal consistency was considered if Cronbach’s alpha coefficient and ICC was  $> 0.81$ <sup>17</sup> and for temporal stability, if the ICC was  $> 0.7$ .<sup>18</sup>

The Jamovi software (Version 1.6, [Computer Software] retrieved from <https://www.jamovi.org>) and SPSS 17.0 (SPSS Inc., Chicago, Ill, USA) were used in the statistical analyses to validate the instrument scores.

### Statistical analysis

#### Of the sample

The characteristics of the population were presented by descriptive statistics, considering

gender, color/race, marital status, income, education and religion. The parametric distribution of the data was assessed using the Shapiro-Wilk test. Differences between groups for the different clefts were assessed using the Mann-Whitney and Kruskal-Wallis tests.

## Results

### Sample characteristics

The final sample consisted of one hundred and two participants. The majority of participants were female (59.8%), self-declared brown (49%) and married (51%). Approximately 57.8% of the sample had a

monthly family income of above three minimum wages (US\$ 224), had completed higher education (65.7%) and were Christian (52.9%).

Table 1 shows the distribution of sample characteristics (of participants included in the study) in relation to gender, color/race, marital status, income, education and religion, as well as the influence of each of these factors on the social judgment of different cleft lips. The control image received higher scores when judged by women ( $p = 0.018$ ) and by persons with complete higher education ( $p=0.033$ ), while the FLUDI image received higher scores when judged by women ( $p = 0.023$ ). In the other images, gender

**Table 1.** Sample distribution and influence of different sociodemographic factors on the perception of different cleft lips

Variable	N (%)	C	IRUCL	CLUCL	IBCL	IMCL	CBCL	CRUCL	CMCL	ILUCL
Genre										
Man	41 (40.2)	32.7 ± 4.39	29.2 ± 4.22	28 ± 4.76	27.4 ± 4.88	30.8 ± 4.31	27.4 ± 5.13	26.9 ± 5.52	27.2 ± 4.89	29.6 ± 4.35
Woman	61 (59.8)	35.0 ± 4.70	31.3 ± 5.45	29 ± 5.22	27.6 ± 5.56	32.6 ± 5.94	27.2 ± 5.22	27.3 ± 5.21	28.0 ± 5.53	31.3 ± 5.65
p-value <sup>MW</sup>		0.018	0.023	0.400	0.888	0.081	0.878	0.840	0.577	0.088
Color/Race										
Yellow	3 (2.9)	35.7 ± 5.86	33.3 ± 5.13	30.3 ± 5.13	30.3 ± 6.08	36 ± 6.08	30.3 ± 5.13	29 ± 7.0	29.3 ± 6.51	31 ± 6.24
White	34 (33.3)	34.4 ± 4.64	31.6 ± 4.78	28.8 ± 5.05	27.1 ± 5.65	32.5 ± 5.65	27 ± 4.52	26.9 ± 4.55	27.6 ± 4.57	31.1 ± 4.91
Indigenous	1 (1)	31 ± 0.0	26.0 ± 0.0	25.0 ± 0.0	20 ± 0.0	24 ± 0.0	23 ± 0.0	23 ± 0.0	29 ± 0.0	26 ± 0.0
Brown	50 (49)	34.2 ± 4.71	30.5 ± 5.0	28.7 ± 5.19	27.9 ± 5.61	32.1 ± 5.10	27.6 ± 5.73	27.6 ± 5.89	27.8 ± 5.86	31 ± 5.42
Black	13 (12.7)	33 ± 4.08	27.2 ± 4.92	27.1 ± 4.77	26.5 ± 5.29	29.4 ± 5.22	26.2 ± 4.85	26.5 ± 5.43	26.7 ± 5.17	28.4 ± 5.17
Other	1 (1)	23 ± 0.0	29.0 ± 0.0	34.0 ± 0.0	36 ± 0.0	30 ± 0.0	39 ± 0.0	21 ± 0.0	28 ± 0.0	29 ± 0.0
p-value <sup>KW</sup>		0.419	0.090	0.600	0.253	0.141	0.645	0.583	0.953	0.381
Marital status										
Married	52 (51)	34.4 ± 4.54	30.7 ± 5.5	28.5 ± 5.32	27.3 ± 5.35	32.4 ± 5.37	27.1 ± 5.03	27.5 ± 5.41	27.5 ± 5.41	30.6 ± 5.18
Divorced	2 (2)	37.5 ± 0.71	32 ± 8.49	29 ± 8.49	28.0 ± 9.9	32.0 ± 8.49	27.5 ± 13.4	27.5 ± 13.4	27.5 ± 13.4	32.5 ± 6.36
Separated	2 (2)	31.0 ± 4.24	28.5 ± 7.78	28 ± 7.07	28.5 ± 7.78	30.0 ± 4.24	28.5 ± 4.95	29.0 ± 5.66	28.5 ± 4.95	30.0 ± 4.24
Single	43 (42.2)	33.6 ± 4.87	30.3 ± 4.52	28.7 ± 4.73	27.7 ± 5.16	31.3 ± 5.49	27.3 ± 5.12	26.5 ± 5.15	27.7 ± 4.94	30.6 ± 5.43
Stable union	3 (2.9)	33.0 ± 7.0	30.7 ± 5.13	29 ± 5.29	28.7 ± 5.51	32.3 ± 6.35	28.7 ± 6.35	29.0 ± 5.29	29.3 ± 5.86	31.3 ± 5.51
p-value <sup>KW</sup>		0.594	0.988	0.998	0.988	0.849	0.995	0.835	0.987	0.983
Income										

and education did not influence the judgment score ( $p > 0.05$ ). Color/race, marital status, income and religion did not influence the judgment of different types of cleft lips or control image ( $p > 0.05$ ).

### Psychometric properties

The questionnaire obtained a complete response rate of 99.0% ( $n = 102$ ), indicating good acceptability of the instrument. One participant was excluded for not having fully answered the questionnaire. Floor and ceiling effects were observed in practically all types of clefts presented (Table 2).

The validity assessed by the known groups test showed that there was a significant difference ( $p < 0.001$ ) in the perception between the control image and the different clefts, showing evidence of the discriminant validity of the instrument (Table 3).

A satisfactory degree of internal consistency was shown for the instrument as a whole (Table 4), and relative to agreement between the test and the retest, demonstrating that the instrument showed reliability (Table 5).

## Discussion

The aim of this study was to develop and assess the psychometric properties of the Brazilian Version of Lay persons' Social Judgments about Cleft-lip

**Table 2.** Floor and ceiling effects on different cleft lips ( $n = 102$ )

Variable	Floor (%)	Ceiling (%)
IRUCL	18.1	36.0
CLUCL	24.7	28.8
IBCL	27.2	23.6
IMCL	11.1	38.9
C	4.7	47.8
CBCL	27.9	22.8
CRUCL	29.0	22.9
CMCL	25.1	22.8
ILUCL	13.2	32.0

IRUCL: Incomplete right unilateral cleft lip; CLUCL: Complete left unilateral cleft lip; IBCL: Incomplete bilateral cleft lip; IMCL: Incomplete midline cleft lip; C: Control; CBCL: Complete bilateral cleft lip; CRUCL: Complete right unilateral cleft lip; CMCL: Complete median cleft lip; ILUCL: Incomplete left unilateral cleft lip.

Scale (B-LSojCleft-S). The social stigma related to the presence of orofacial clefts has a cultural component that can negatively influence social judgment about the individual in different areas

**Table 3.** Test of known groups between the control image and the different cleft lips ( $n = 102$ )

Variable	Mean $\pm$ SD	Median [minimum, maximum]
IRUCL	30.5 $\pm$ 5.08*	30.5 [16. 40]
CLUCL	28.6 $\pm$ 5.04*	28.0 [17. 41]
IBCL	27.5 $\pm$ 5.27*	27.0 [16. 39]
IMCL	31.9 $\pm$ 5.40	32.0 [18. 42]
C	34.0 $\pm$ 4.69	34.0 [23. 42]
CBCL	27.3 $\pm$ 5.16*	27.0 [15. 39]
CRUCL	27.1 $\pm$ 5.37*	27.0 [14. 40]
CMCL	27.7 $\pm$ 5.27*	27.5 [14. 39]
ILUCL	30.6 $\pm$ 5.20*	30.0 [14. 42]
p-value <sup>F</sup>	< 0.001	

SD: standard deviation; \*Difference from the control image; Friedman test; IRUCL: Incomplete right unilateral cleft lip; CLUCL: Complete left unilateral cleft lip; IBCL: Incomplete bilateral cleft lip; IMCL: Incomplete midline cleft lip; C: Control; CBCL: Complete bilateral cleft lip; CRUCL: Complete right unilateral cleft lip; CMCL: Complete median cleft lip; ILUCL: Incomplete left unilateral cleft lip.

**Table 4.** Internal consistency for the 14 items (item-by-item variation) ( $n=102$ )

Variable	Cronbach's Alpha	McDonald's Omega
IRUCL	0.85 (0.83–0.85)	0.85 (0.83–0.86)
CLUCL	0.85 (0.83–0.85)	0.85 (0.83–0.85)
IBCL	0.86 (0.84–0.86)	0.86 (0.84–0.86)
IMCL	0.88 (0.87–0.89)	0.89 (0.87–0.9)
C	0.87 (0.85–0.89)	0.89 (0.87–0.9)
CBCL	0.85 (0.83–0.86)	0.86 (0.83–0.86)
CRUCL	0.87 (0.85–0.87)	0.87 (0.86–0.87)
CMCL	0.87 (0.85–0.88)	0.87 (0.86–0.88)
ILUCL	0.87 (0.86–0.88)	0.88 (0.86–0.89)

IRUCL: Incomplete right unilateral cleft lip; CLUCL: Complete left unilateral cleft lip; IBCL: Incomplete bilateral cleft lip; IMCL: Incomplete median cleft lip; C: Control; CBCL: Complete bilateral cleft lip; CRUCL: Complete right unilateral cleft lip; CMCL: Complete median cleft lip; ILUCL: Incomplete left unilateral cleft lip.

**Table 5.** Temporal stability (ICC) and mean and standard deviation for the different clefts, considering the sample in the test and retest (n = 73).

Variable	ICC (IC)	Test	Retest
		Mean ± SD	Mean ± SD
IRUCL	0.99 (0.98–0.99)	29.92 ± 5.42	29.82 ± 5.3
CLUCL	0.97 (0.95–0.98)	27.97 ± 5.3	27.9 ± 5.12
IBCL	0.98 (0.96–0.99)	27.00 ± 5.36	26.82 ± 5.22
IMCL	0.99 (0.98–0.99)	31.45 ± 5.6	31.42 ± 5.5
C	0.98 (0.96–0.98)	34.01 ± 4.58	33.9 ± 4.55
CBCL	0.99 (0.98–0.99)	26.88 ± 5.35	26.74 ± 5.43
CRUCL	0.99 (0.99–0.99)	26.67 ± 5.52	26.52 ± 5.53
CMCL	0.99 (0.98–0.99)	27.23 ± 5.57	27.05 ± 5.81
ILUCL	0.99 (0.99–0.99)	30.30 ± 5.47	30.32 ± 5.44

ICC: intraclass correlation coefficient; CI: confidence interval; SD: standard deviation; \*Difference from the control image; Friedman test; IRUCL: Incomplete right unilateral cleft lip; CLUCL: Complete left unilateral cleft lip; IBCL: Incomplete bilateral cleft lip; IMCL: Incomplete midline cleft lip; C: Control; CBCL: Complete bilateral cleft lip; CRUCL: Complete right unilateral cleft lip; CMCL: Complete median cleft lip; ILUCL: Incomplete left unilateral cleft lip.

of his/her life. This social stigma encourages the need for governmental actions that promote an increase in public education with regard to these fissures, mainly in middle and low-income countries where underreporting of cases probably occurs.<sup>13</sup> Thus, having an instrument with validated scores capable of assessing the social judgment suffered due to the presence of cleft lip can arouse the need to implement effective public policies.

The instrument developed in this study was well accepted by the participants. Among the psychometric properties, the instrument showed discriminant validity and internal consistency, indicating the reliability of the instrument verified by Cronbach's alpha tests, which is the test most used by researchers for this purpose.<sup>19</sup> All items of the instrument presented values considered excellent, since values below 0.70 were considered unacceptable and greater than 0.70 acceptable;<sup>18</sup> that is, the items that made up the instrument measured the construct. Furthermore, the data obtained by using the intraclass correlation index (ICC) applied to the test and retest samples indicated that there was consistency in the repetition of measures, which provided the questionnaire with high temporal stability and the instrument with reliability. That is, the participants presented practically the same pattern of responses at different

times, which is expected as one of the indicators of reliability,<sup>20</sup> suggesting that the response options can be considered clear and their language understandable.

However, the presence of floor and ceiling effects in the items of the instrument suggested that the response system used in this study could be adjusted to a Likert scale of more points, increasing the participants' possibilities of providing responses, and could consequently, reduce the floor and ceiling effects. The 5-point Likert scale offers enough response options to identify the strength of opinion while the 2- or 3-point scales only measure direction. Likert scales with fewer than 5 or more than 7 points can be considered significantly less accurate.<sup>21</sup>

When analyzing the sociodemographic characteristics of the study, a higher level of female participation was observed. Women had a more favorable social judgment about images without cleft (control) and incomplete right cleft lip than men. This finding differs from that found in some previous studies, in which sex did not influence judgment.<sup>22,23</sup> However, the influence of the observer's gender on the perception of asymmetry and facial attractiveness has previously been reported,<sup>24,25</sup> pointing out that women are more sensitive relative to perceiving eye asymmetries, while men are more sensitive to awareness of nose asymmetries.<sup>25</sup>



Social judgment reflects how one individual perceives the other. In this study, when the layperson's perception of cleft lip was assessed, there was no difference between the levels of education, except in the assessment of the control image (without cleft); and the lower the level of education, the worse was the social judgment. The scientific literature has reported that lay persons have a less accurate assessment of facial esthetics when compared with dentists,<sup>22</sup> however, others have not identified discrepancies in the judgment of people with different levels of academic qualification.<sup>23</sup> Therefore, the influence of education on esthetic perception has not yet been amply clarified.

The photographs in which cleft lips were present had lower scores compared with the image without cleft; this finding reiterates data from previous research that showed negative consequences resulting from the presence of clefts.<sup>1,4-7,12</sup> The lowest score was attributed to the complete right unilateral cleft lip, which showed impairment of the lip, nose and poor dental positioning. This can be explained by the fact that these areas are points of facial attractiveness and are quickly observed during visual contact.<sup>8,23</sup> Initial impressions interfere with later judgments as the time spent observing the face increases.<sup>10</sup> The present study suggested a correlation between extent of the cleft and impact on the judgment

received. The scientific literature has reported that the greater the orofacial dysfunction, the greater the impairment of the quality of life of individuals with orofacial clefts.<sup>26,27</sup>

Of the limitations found in this study, the response system adopted can be considered. This may have resulted in the ceiling and floor effects, however, it opens up the possibility of future studies to confirm or refute this hypothesis. We emphasize that the fact that the instrument was written in Brazilian Portuguese restricts its applicability. This makes the process of cross-cultural adaptation necessary for its application in countries with different languages, and with sociodemographic conditions of the sample differing from those of the present study, in which the properties of measurements displayed could be changed.

## Conclusion

The instrument presented valid and reliable scores in the assessment of social judgments of lay persons relative to the consequences caused by different types of cleft lip for the population studied. The presence of cleft lip impacts the social judgment of these individuals, and the greater the impairment caused by the cleft, the worse the social judgment.

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