

# Unhealthy oral habits and oral health-related quality of life in a group of Chilean preschool children

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## ABSTRACT

**Purpose:** to characterize unhealthy oral habits and oral health-related quality of life in a group of children from Santiago, Chile, comparing these results by sex and the presence or absence of unhealthy oral habits.

**Methods:** parents/caregivers of 100 boys (4.06±0.7 years old) and 92 girls (4.09±0.7 years old) from preschools answered the Unhealthy Oral Habits Identification Instrument and the Early Childhood Oral Health Impact Scale via Google Forms.

**Results:** altogether, 63.3% had one, and 16.9% had two unhealthy oral habits; 57.6% used a bottle with a regular nipple. The mean Early Childhood Oral Health Impact Scale score was 16.5 out of 52 points. Quality of life did not differ significantly between children with one or more habits and those without unhealthy oral habits.

**Conclusions:** bottle use with a regular nipple was the most prevalent habit. Quality of life had a greater impact on children at a functional level, with no significant differences by sex or in quality of life, based on the presence or absence of unhealthy oral habits.

**Keywords:** Prevalence; Tongue Habits; Myofunctional Therapy; Malocclusion; Feeding Behavior; Child, Preschool

A study conducted at the Jardines Infantiles de la Fundación Integra, Northwest Metropolitan Region, Santiago de Chile, Chile.

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## INTRODUCTION

Habits are customs or practices acquired by repeating the same act often, initially consciously and later unconsciously<sup>1,2</sup>. When they are unhealthy and oral-centered, they are referred to as unhealthy oral habits (UOH) – also known in the literature as deforming oral habits<sup>3</sup>, oral habits<sup>4</sup>, bad oral habits<sup>5</sup>, deleterious habits<sup>6</sup>, and so forth – and can alter normal craniofacial and dental development, due to an imbalance between internal and external orofacial muscle forces, leading to dentoskeletal deformations or malocclusions<sup>3-7</sup>.

It has been reported that malocclusions have not only physical but also economic, psychological, social, functional, and aesthetic consequences<sup>8</sup>. UOHs have been reported as one of the most influential factors in malocclusion development<sup>9</sup>. The severity of their impact depends on various factors, such as the type, age of onset, frequency, and duration of the bad habit, and so on. Other factors, such as genetic ones, also determine the severity and type of malocclusion<sup>1,4,10,11</sup>. This is of utmost importance, considering that dental-maxillary anomalies are the third most prevalent dental pathology in Chile<sup>1,12</sup>. Furthermore, Agurto et al. (1999)<sup>1</sup> report sex-related differences, with more UOHs in boys than in girls.

Gacitúa et al. (2001)<sup>13</sup> verified that 87% of a group of children aged 6 to 9 years from Recoleta, Chile, had at least one UOH, quite evenly distributed by sex (51% girls, 49% boys). They considered mouth breathing, infantile swallowing, sucking, and tongue, lip, and/or object-related interposition. Candia-Castillo et al. (2020)<sup>14</sup>, in turn, reported that 32.7% of children aged 5 to 11 years evaluated in Ercilla had at least one UOH (47.7% boys and 52.3% girls), assessing specifically atypical swallowing, mouth breathing, oronasal breathing, and tongue thrust/interposition. However, the prevalence of UOH in Chilean children under 6 years old was only published in 1999 by Agurto et al. (1999)<sup>1</sup>, who reported 66% of UOHs (sucking, mouth breathing, and tongue interposition), without studying differences by sex.

Oral health-related quality of life is the subjective perception of physical, emotional, and social well-being regarding oral health and orofacial functions. The factors that may influence quality of life include unfavorable oral conditions, which can have a negative impact on the individual and their family<sup>15</sup>.

Quality of life is considered an important indicator in evaluating a person's condition in virtually all areas of physical and mental health, including oral health.

Hence, quality of life – particularly oral health-related quality of life – is considered when establishing intervention objectives and outcomes, as they must also be based on the person's experiences and perceptions, approaching the influence of sociocultural factors, educational level, family structure, and access to care<sup>16</sup>. This is why the term “oral health-related quality of life” is found in articles by authors such as Diaz-Reissner et al. (2017)<sup>17</sup> and Bennadi & Reddy (2013)<sup>18</sup>.

Preschoolers' quality of life is a fundamental aspect, encompassing their physical, emotional, and social well-being during this crucial developmental stage. According to studies by the World Health Organization (WHO), quality of life is an essential parameter for assessing the health status of children in all aspects, including oral health<sup>19</sup>.

Oral health plays a crucial role in preschoolers' quality of life. Changes in oral functions (chewing, swallowing, and speech) can significantly impact their physical and emotional well-being. For instance, chewing difficulties can affect food intake and proper nutrition, which, in turn, can influence the child's growth, development, self-esteem, and social interaction, thus affecting their quality of life<sup>11,14</sup>.

Therefore, updated information on this topic is beneficial to guide health promotion and prevention plans at this level, supporting preschoolers' physical, emotional, and social well-being. Hence, this study aimed to a) characterize the occurrence of UOHs, b) characterize the oral health-related quality of life, c) compare these results between boys and girls, and d) compare the quality of life between children without UOHs and those with one or more UOHs in a group of children from Santiago, Chile.

## METHODS

This research was approved by the Bioethics Committee of the Medical School at the Universidad de Chile, project no. 033-2021.

### Design

Quantitative, observational, cross-sectional study.

### Participants

Approximately 400 parents and caregivers of children aged 2 to 5 years from 40 Integra preschools in the Northwest Metropolitan Region were invited to participate in the project titled: “Effect of a program promoting healthy oral habits and proper chewing in

children aged 2 to 5 years attending Integra preschools through education for parents/caregivers and educators." Initial information was collected regarding UOHs and oral health-related quality of life of the children and their families – which this article analyzed. This study considered the UOHs reported in Pereira et al. (2017)<sup>11</sup>. Of the total parents/caregivers invited, 192 agreed to participate, corresponding to 192 participating children. The study participant inclusion criteria were that the informant adult be the primary guardian of a child aged 2 to 5 years attending the invited Integra preschools. The exclusion criterion was the lack of authorization from the responding adult.

## Procedures and instruments

The coordinators of the Integra daycare centers and preschools network were contacted in January 2021. After discussions and agreements, all parents/caregivers of the children were invited to participate in the study.

They were contacted and invited via WhatsApp and email. An informed consent form and the following instruments were sent to those who agreed to participate for them to respond. Data were collected between May and July 2021.

### *Unhealthy Oral Habits Identification Instrument*

Pereira et al. (2017)<sup>11</sup> developed this questionnaire with items about whether the child has oral habits, their duration, breastfeeding duration, and possible changes in speech, occlusion, and breathing according to the parent's/guardian's perception<sup>11</sup>. The instrument was translated and adapted to Spanish by three speech-language-hearing pathologists specializing in oral motor therapy, and the data were collected via Google Forms.

### *Early Childhood Oral Health Impact Scale (ECOHIS)*

The ECOHIS is a quality-of-life scale that measures the impact of oral health on the quality of life of children aged 3 to 5 years and their families, answered by the child's parent/caregiver based on their perception. This survey has 13 questions, grouped into two sections: impact on the child (1. Tooth, mouth, or jaw pain; 2. Difficulty drinking hot or cold beverages; 3. Difficulty eating certain foods; 4. Difficulty pronouncing certain

words; 5. Absence from daycare, preschool, or school; 6. Sleep problems; 7. Irritability or frustration; 8. Avoided smiling; and 9. Avoided talking) and impact on the family (10. You or another family member have been worried; 11. You or another family member have felt guilty; 12. It has taken your or other family members' time; 13. It has impacted your family's finances). The questionnaire is scored with a Likert-type scale, responded with never, almost never, occasionally, often, and very often. ECOHIS has a score for the child impact section, another for the family impact section, and a total score considering both sections.

The total score ranges from 0 to 52; the impact on the child, from 0 to 36; and the impact on the family, from 0 to 16. Higher scores indicate a negative impact or many oral health-related quality-of-life problems<sup>15</sup>. The data were likewise collected via Google Forms.

## Statistical analysis

Data were collected in Microsoft Excel and analyzed with The Jamovi Project (2022), version 2.3<sup>20</sup>, and The R Core Team (2021), version 4.1<sup>21</sup>. Categorical data were organized in frequency tables, and numerical data were calculated regarding measures of central tendency (mean) and variability (standard deviation) for the total participants and the girls' (G1) and boys' groups (G2). The chi-square and Mann-Whitney U tests compared the results between the groups. The latter also compared the quality of life between children without UOHs and those with one or more UOHs. Differences were considered significant when  $p < 0.05$ .

## RESULTS

Altogether, 192 parents ( $32 \pm 6$  years old) participated in the study, representing 100 boys ( $4.06 \pm 0.7$  years old) and 92 girls ( $4.09 \pm 0.7$  years old).

Table 1 shows the occurrence of oral habits in the study sample, comparing girls (G1) with boys (G2). A total of 172 parents/caregivers responded to the survey on the occurrence of UOHs; 63.3% reported that their children had at least one UOH, 16.9% reported two UOHs, and 1.1% reported three UOHs. The most reported UOHs were bottle use with a regular nipple (57.6%), followed by tongue interposition during swallowing or speech (19.2%), lip sucking (18.1%), and use of a regular pacifier (16.4%). However, the groups did not differ significantly ( $p > 0.05$ ).

**Table 1.** Occurrence of oral habits in the total sample and comparison between both biological sexes

History		Total (%)	G1 (N)	G2 (N)	p-value (1)
The child was breastfed (BF)	Yes	91.5 %	75	82	0.565
	No	8.5 %	6	9	
How long was the child breastfed?	Less than 6 months	22.6 %	20	19	0.756
	6 months	11.9 %	8	13	
	More than 6 months	18.6 %	14	18	
	More than 1 year	46.9 %	39	41	
How many UOHs does the child have?	0	18.6 %	9	22	0.058
	1	63.3 %	58	51	
	2	16.9 %	14	16	
	3	1.1 %	0	2	
The child uses bottle with a regular nipple	No	42.4 %	33	40	0.67
	Yes	57.6 %	48	51	
The child uses bottle with an orthodontic nipple	No	93.8 %	74	87	0.256
	Yes	6.2 %	7	4	
The child uses a regular pacifier	No	83.6 %	69	74	0.499
	Yes	16.4 %	12	17	
The child uses an orthodontic pacifier	No	97.7 %	78	90	0.258
	Yes	2.3 %	3	1	
The child sucks their thumb	No	91.5 %	74	83	0.972
	Yes	8.5 %	7	8	
The child bites his/her nails	No	91.0 %	73	83	0.807
	Yes	9.0 %	8	8	
How many UOHs did the child use to have?	0	9.6 %	7	10	0.945
	1	67.2 %	54	61	
	2	22.0 %	19	19	
	3	1.1 %	1	1	
The child used to use bottle with a regular nipple	No	32.2 %	24	31	0.533
	Yes	67.8 %	57	60	
The child used to use bottle with an orthodontic nipple	No	91.5 %	73	85	0.432
	Yes	8.5 %	8	6	
The child used to use a regular pacifier	No	76.3 %	66	66	0.165
	Yes	23.7 %	15	25	
The child used to use an orthodontic pacifier	No	97.2 %	78	89	0.557
	Yes	2.8 %	3	2	
The child used to suck their thumb	No	93.2 %	76	84	0.696
	Yes	6.8 %	5	7	
The child used to bite his/her nails	No	93.8 %	75	86	0.609
	Yes	6.2 %	6	5	
The child sucks or bites his/her lips	No	81.9 %	68	73	0.525
	Yes	18.1 %	13	18	
The child interposes his/her tongue to speak or swallow	No	80.8 %	62	77	0.18
	Yes	19.2 %	19	14	
The child has speech difficulties or changes	No	51.4 %	43	44	0.535
	Yes	48.6 %	38	47	
The child has dental changes	No	84.2 %	71	74	0.254
	Yes	15.8 %	10	17	

History		Total (%)	G1 (N)	G2 (N)	p-value (1)
The child keeps his/her mouth open for long	No	91.5 %	77	81	0.147
	Yes	8.5 %	4	10	
The child has difficulty swallowing liquids	No	96.6 %	77	89	0.328
	Yes	3.4 %	4	2	
The child has difficulty swallowing solid foods	No	85.3 %	68	78	0.747
	Yes	14.7 %	13	13	
The child has difficulty swallowing pureed foods	No	87.0 %	73	76	0.204
	Yes	13.0 %	8	15	
The child prefers	Liquids	33.3 %	27	28	0.624
	Pureed foods	15.8 %	15	13	
	Solid foods	50.8 %	39	50	

Captions: (1) = chi-square test; G1 = girls; G2 = boys; % = percentage; N = number.

Table 2 presents the quality-of-life results as reported by the 192 parents/caregivers. The total ECOHIS score was 16.5 out of the possible 52 points. The child impact score was 8.80 out of 36 points; the most affected aspects were functional limitations (4.47) (in which the most influential item was “Difficulty pronouncing certain words”), and psychological aspects (2.91) (in which the most influential question was “Has the child been irritable or frustrated?”). The family impact score was

7.76 out of 16 points; the most affected aspect was family function (4.17), with a similar influence from both items (“It has taken your or other family members’ time” and “It has impacted your family’s finances”). Again, G1 and G2 did not differ significantly.

Lastly, oral health-related quality of life did not differ significantly between children without any UOH and children with one or more UOHs in either the child impact (0.806) or family impact sections (0.905).

**Table 2.** Early Childhood Oral Health Impact Scale score per impact group (impact on the child/impact on the caregiver), the total sample, and comparison between both biological sexes

Impact group	Total Mean	G1 Mean	G2 Mean	p-value (*)
<b>Impact on the child</b>				
- oral symptoms (1)**	0.40	0.435	0.390	0.387
- Functional limitations (4)	4.47	4.55	4.41	0.63
- Psychological aspects (2)	2.91	3.14	2.71	0.086
- Self-image/social interaction (2)	1.03	1.03	1.03	0.951
Total score – impact on the child	8.80	9.15	8.54	0.188
<b>Impact on the family</b>				
- Parents' concern (2)	3.61	3.57	3.65	0.756
- Family function (2)	4.17	3.98	4.33	0.167
Total score – impact on the family	7.76	7.55	7.98	0.509
<b>Total ECOHIS</b>	<b>16.56</b>			

Captions: (\*) = Mann-Whitney test. Abbreviations: G1 = girls; G2 = boys; SD = standard deviation.

(\*\*) Numbers in parentheses refer to the number of questions in that Early Childhood Oral Health Impact Scale (ECHOIS) area.



## DISCUSSION

This research aimed to characterize the occurrence of UOHs and oral health-related quality of life, compare these results by sex, and compare the quality of life between children without UOH and those with one or more UOHs in a group of Chilean children.

There are significant limitations when discussing UOH quantity and types, as both national and international studies consider different oral habits and age ranges. However, some analyses can be drawn, as presented below.

Three studies have addressed UOH prevalence in Chilean children. Agurto et al. (1999)<sup>1</sup> applied a method similar to the one used in the present study, evaluating 1,110 children aged 3 to 6 years from the eastern area of Santiago, and reporting a 66% prevalence of UOHs. This percentage is lower than the 81.3% in the current study, whose children had one to three UOH. This increase may have been influenced by reported routine and lifestyle changes during the COVID-19 pandemic when the surveys for this study were conducted<sup>22</sup>. Another factor that may have influenced this higher percentage is the decrease in dental visits during the pandemic<sup>23</sup>.

The most frequent UOHs in the study by Agurto et al. (1999)<sup>1</sup> were sucking (62%), mouth breathing (23%), and tongue interposition (15%). The most sucked objects were the bottle (reported by 55%), the finger (23%), and the pacifier (15%). The present study found similar values, as 57.6% used a bottle and 16.4% used a pacifier. In contrast, it found a significant difference in the percentage of children who sucked their fingers, with only 8.5% in our study.

Candia-Castillo et al. (2020)<sup>14</sup> conducted a study with children aged 5 to 11 years from the commune of Ercilla, Chile, finding 61.5% with at least one UOH (atypical swallowing, mouth breathing, mixed breathing, and tongue interposition). This is similar to the findings in this study, where 63.3% of children had only one UOH. However, 81.3% of the children in this study had one to three UOHs, which may be due to various factors, including age, as previously reported<sup>24</sup>. Moreover, the study by Gacitúa et al. (2001)<sup>13</sup> found that 87% of children aged 6 to 9 years evaluated in the commune of Recoleta had some UOH. This value is higher than what was found in the present research, possibly because the researchers included tongue interposition in swallowing and/or articulation, a habit expected during this period due to the anterior dental eruption<sup>25</sup>. This is reinforced by the fact that the most

prevalent habit in the referenced study was tongue interposition, with 28%, compared to 19.2% in the present study. However, the two studies cannot be directly compared because they included children in different age ranges.

The present study found no significant differences in UOHs between the sexes, which is consistent with the findings reported by Gacitúa et al. (2001)<sup>13</sup> and Candia-Castillo et al. (2020)<sup>14</sup>. In contrast, the study by Agurto et al. (1999)<sup>1</sup> found a higher prevalence of UOHs in boys than in girls.

Some international studies within the same age range as this research are interesting to discuss. Franco et al. (2012)<sup>26</sup> conducted a study on Spanish children aged 2 to 6 years and reported that 90.7% had at least one UOH – 7.1% sucked their thumbs, 8% used pacifiers, 12.4% had lip interposition, 16% bit objects, 33.8% bit nails, and 8.6% had atypical swallowing. The prevalence of pacifier use was notably low compared to the 18.7% reported in this study. On the other hand, these Spanish children had a higher prevalence of nail-biting (onychophagia), compared to the 9% found in our study. This contrasts with the findings of the present research, where 81.3% of children had one or more UOHs, and the most frequent habit was bottle use with a regular nipple (57.6%).

Another study with Brazilian children aged 4 months to 6 years reported that 70.8% had at least one UOH<sup>27</sup> – a percentage lower than in the present study. However, pacifier use in that sample was higher than in the current study, at 45.6%. This could be due to the age of the sample, which included children under 1 year old, among whom pacifier use is more common.

In that same country, Pereira et al. (2017)<sup>11</sup> published a study with Brazilian children aged 0 to 12 years. The most prevalent habit was bottle use but with a lower percentage (28.62%) than that of Chilean children in this study (63.8%). On the other hand, 48.6% of the Chilean sample had speech impairments, in contrast with 19.6% of the Brazilian sample. These differences could be due to the different age ranges in both studies. Furthermore, 28.4% of Brazilian children kept their mouths open for long periods, compared to 8.5% in the Chilean sample<sup>11</sup>.

Another study with Brazilian children with a mean age of 3.7 years reported that the most frequent habit was bottle use at 56.1%, which is lower than the 63.8% in Chilean children (if we add the use of both regular and orthodontic nipples). On the other hand, they had similar percentages of pacifier use and thumb sucking,

with 18.4% and 11.9% in Brazilian children and 18.7% and 8.5% in Chilean children<sup>28</sup>.

A Bolivian study with children aged 3 to 7 years reported that the most frequent habit was thumb-sucking, at 53%. However, the authors did not inquire about bottle use<sup>29</sup>. The percentage of children with thumb-sucking is much higher in the Bolivian study, where 53% reported the habit, compared to only 8.5% at the time of the current study and 6.8% having done so previously. The Bolivian study also reported a 28% prevalence of pacifier use, which is higher than the 18.7% found in Chilean children in this study.

In Sweden, Dimberg et al. (2013)<sup>30</sup> examined the prevalence of malocclusions in children aged 3 to 7 years, which included a brief survey on some UOHs. The results showed that 66% of 3-year-old children had at least one sucking habit, which decreased to 4% by age 7. Additionally, 19% of children were mouth breathers at age 3, and only 8% at age 7. However, these data are not directly comparable to the current study's findings.

Farsi et al. (1997)<sup>31</sup> estimated the prevalence of thumb-sucking and pacifier use among Saudi children aged 3 to 5 years. They found that 48.6% of children used to have or currently had at the time of the survey at least one of these habits – pacifier use (37.9%) was more common than thumb sucking (10.46%). These values are lower than the ones in the present study, as a combined 15.3% used to suck their thumbs or were doing so at the time of the survey, and 45.2% used or had used a pacifier. The study concurs that pacifier use is more prevalent than thumb sucking.

Other international studies evaluated children of different age ranges. For instance, the study by Narváez et al. (2010)<sup>32</sup> approached Colombian children aged 6 to 10 years. The research by Chamorro et al. (2016)<sup>33</sup> evaluated children aged 5 to 12 years from the same country. Garde et al. (2014)<sup>10</sup> studied children aged 6 to 12 years from India. Catarí et al. (2014)<sup>34</sup> studied Venezuelan children with mixed dentition. And Larsson et al. (2001)<sup>35</sup> verified sucking habits in Swedish children aged 0 to 3 years. However, their results are not comparable with those found in this study due to their age ranges.

Furthermore, 91.5% of participants in the present study were breastfed – 46.6% for more than 1 year, 18.6% for more than 6 months, and 34.5% for 6 months or less. These data differ from those obtained by Pereira et al. (2016)<sup>11</sup>, where only 5.1% of Brazilian children were breastfed for more than 1 year, and 32.4% for

more than 6 months. It is important to highlight that breastfeeding has a protective effect against malocclusions such as posterior crossbite<sup>36,37</sup> and deep bite<sup>29</sup> in primary dentition. It has also been reported that those who breastfeed for longer than 6 months engage in less thumb-sucking and pacifier use. In contrast, those with shorter breastfeeding durations had a higher UOH prevalence<sup>35,37-39</sup>.

Regarding oral health-related quality of life, the children in our study scored a total of 16.5 points on the ECOHIS, which is higher than the results previously reported in same-age Chilean children<sup>15,40</sup>. In 2018, a study with 100 children aged 3 to 5 years, residing in the communes of Santiago Centro and Renca, reported a total score of 6.83 points<sup>15</sup>. Meanwhile, in 2021, another study with 202 Chilean children aged 3 to 5 years, enrolled in the kindergartens of Fundación INTEGRAL in the city of Temuco, reported a total score of 2.6 points<sup>40</sup>. Moreover, the participants in our study scored 8.80 and 7.76 respectively on the impact on the child and on the family. In contrast, Gonzalez et al. (2018)<sup>15</sup> reported scores of 4.29 for the impact on the child and 2.54 for the impact on the family. As with the increase in UOH, the higher total quality-of-life score may have been influenced by the social-health conditions when the survey was administered. Due to COVID-19 restrictions, families experienced drastic changes in their routines during this period, such as only going out when strictly necessary, changes in their eating habits, and so forth<sup>22</sup>. This could translate into a negative impact on oral health-related quality of life.

Internationally, a study with Peruvian children aged 3 to 5 years with different oral health conditions reported lower values than those recorded in this study – 95 healthy infants scored 1.98 for the impact on the child and 3.28 for the impact on the family; 130 children with early childhood caries scored 2.30 for the impact on the child and 3.98 for the impact on the family; and 135 children with severe early childhood caries scored 4.61 for the impact on the child and 5.16 for the impact on the family<sup>41</sup>. Hence, the sample in the present study had a greater impact.

In contrast, another study with Peruvian children aged 3 to 5 years reported scores closer to those of the present study (impact on the child = 8.8 and on the family = 7.76), particularly higher in the impact on the child. In 77 children with low-severity early childhood caries, the impact on the child was 9.03 and on the family 4.76 points; in 40 children with high-severity early childhood caries, the impact on the child was 16.81

and on the family 8.08; in 138 children without dental-alveolar trauma, the impact on the child was 10.16 and on the family 5.07; in 15 children with trauma, the impact on the child increased to 11.93 and on the family to 6.14; in 143 children without anterior malocclusions, the impact on the child was 10.16 and on the family 5.06 points; and in 10 cases with malocclusions, the impact on the child increased to 12.8 and on the family to 6.8<sup>42</sup>. However, the present study did not control for these variables, which future studies should approach along with other clinical variables.

Quality of life was also significantly associated with dental diseases in children<sup>43</sup>, such as caries, with a prevalence of 49% in Chilean children<sup>44</sup>. Therefore, future studies should also consider this variable in their analyses. In addition, oral health-related quality of life is a “multidimensional construct” that recognizes, among other factors, the impact of economic division and sociodemographic characteristics, which were not controlled in this study<sup>16</sup>. Therefore, the difference in impact could be due to other factors that also affect quality of life, such as UOHs.

## Limitations

The study limitations include the failure to corroborate the parents' reports on speech difficulties or disorders, dental issues, mouth breathing at rest, and difficulties swallowing liquid, solid, or pureed foods to determine relationships between UOHs and these disorders. Hence, future research should address these limitations, identify other underlying factors contributing to the prevalence of UOHs and oral health-related quality of life, develop oral health promotion and prevention programs for this population and context, and evaluate their impact on them.

## CONCLUSION

The most prevalent UOH among children in the Metropolitan Region was bottle use with a regular nipple. Meanwhile, oral health-related quality of life had a greater functional and psychological impact on the child. Moreover, parents had a high perception of the children's speech difficulties.

It is important to note that boys did not differ significantly from girls in UOHs and quality of life. Likewise, quality of life did not differ significantly between the group without UOHs and the group with one or more UOHs.

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Red de salas cunas y jardines infantiles Integra.  
Sociedad Chilena de Fonoaudiología.

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**Authors' contributions:**

MAFG: Conceptualization; Data curation; Investigation; Methodology; Resources; Supervision; Writing - Original draft; Writing - Review and editing.

DRC: Conceptualization; Data curation; Investigation; Project administration; Visualization; Writing - Original draft; Writing - Review and editing.

FIA: Conceptualization; Data curation; Formal analysis; Resources; Supervision; Validation; Writing - Original draft; Writing - Review and editing.

**Data sharing statement:**

The data generated and analyzed during this study will not be publicly available. However, the corresponding author will be available to answer any questions regarding the study methodology and results.