

Impact of oral health on the quality of life of young people in confinement, Córdoba, Argentina: A mixed methods study.

María M. Barnetche¹ & Lila S. Cornejo.¹

Affiliations: ¹Facultad de Odontología, Universidad Nacional de Córdoba, Argentina.

Corresponding author: María M. Barnetche. Fructuoso Rivera 1317- Córdoba (CP 5000), Argentina. Phone: (54-9) 3513323525. E-mail: marcebarnetche@yahoo.es; marcebarnetche@gmail.com

Receipt: 06/04/2017 **Revised:** 06/12/2017
Acceptance: 06/27/2017 **Online:** 06/27/2017

Conflict of interests: None.

Ethics approval: The working protocol was approved by the Advisory Board of the PhD Program of the School of Dentistry at Universidad Nacional de Córdoba (UNC).

Funding: None.

Authors' contributions: Both authors contributed equality to the complete study.

Acknowledgements: None.

Cite as: Barnetche MM & Cornejo LS. Impact of oral health on the quality of life of young people in confinement, Córdoba, Argentina: A mixed methods study. *J Oral Res* 2017; 6(6):147-153.
[doi:10.17126/joralres.2017.044](https://doi.org/10.17126/joralres.2017.044)

Abstract: Introduction: Quality of life can be understood as the perception subjects have of their position in life in relation to their goals, expectations and concerns. Measuring and understanding the impact of oral health on the quality of life of people may contribute to the promotion of health and prevention of disease. The aim of this study was to evaluate the impact of oral health on the quality of life of young people in confinement. Methodology: Cross-sectional study with mixed approach. Adolescents between 14 and 18 years of age, confined in socio-educational juvenile detention centers in the Province of Córdoba, Argentina, were included in the study. After signing of informed consent, the OHIP-49 questionnaire was applied to 70 youngsters and 32 semi-structured interviews were conducted. Results: The OHIP-49 had a mean of 53.37±28.77, the dimensions with more impact were: functional limitation, physical pain and psychological discomfort. Confinement emerges as an amplifier of sensations and as a barrier for accessing palliative care. Regarding aesthetic aspects, subjects reported specific discomfort that does not always interfere with their self-esteem or relationship with peers. Conclusions: Young people perceive the impact of oral health on their quality of life from episodes of suffering, although not only because of pain, but also for aesthetic reasons. Confinement creates a particular context for sensations and resolutions on health-disease-care processes regarding oral health.

Keywords: Quality of life; oral health; interviews; adolescents.

INTRODUCTION.

Quality of life (QoL) is a way of expressing a person's perception of his/her position in life in relation to their goals, expectations and concerns. The QoL of a society is a representation of life styles and an assessment of them, conditioned by the culture of a particular society.¹ Health-related QoL is defined as the well-being perceived by the subjects in relation to the different domains of their life, and the impact of these on their health.²

The perception of the complex health-disease-care process (HDCP) is personal and subjective and can only be understood if it is placed in the context of beliefs, values and the sociocultural environment of each individual, taking into consideration their material conditions of life.^{3,4}

Feeling healthy or sick is not the same for all individuals, it depends on the geographical area, socioeconomic background, level of education, and perception of the world, among other factors.⁵ Each social group has a conception of what it means to be healthy or sick, what are the positive or negative behaviors associated to their health. This determines whether or not an individual feels the need to perform the practices they have categorized as healthy.

Oral diseases influence the QoL of people in different aspects of their daily life such as mastication, articulation of words, physical appearance, as well as interpersonal relationships and job opportunities.^{6,7} Oral health is considered an important mediator of QoL due to its psychological component.⁸⁻¹⁰ Oral health-related QoL (OHRQoL) has been developed to estimate the social and functional impact of oral diseases.¹¹

Qualitative research is focused mainly on people's lives, their subjective perspectives, their histories, behaviors, experiences, interactions, actions and senses. All this is interpreted in the specific context in which they occur. In this way qualitative research aims to understand these contexts and processes, explaining them from a local viewpoint.^{12,13} Studying QoL using different methodological perspectives and approaches could contribute to a better understanding of what subjects perceive and thus proceeding to plan around their needs.¹⁴

To design and implement health promotion and disease prevention programs for young people confined in juvenile detention centers of the Province of Córdoba, it is necessary

to understand their perception of OHRQoL.

The aim of the present study was to evaluate the perception of the impact of oral health on the QoL of young inmates confined in socio-educational juvenile detention centers in the Province of Córdoba, Argentina.

MATERIALS AND METHODS.

Design

A cross-sectional study was carried out combining quantitative and qualitative methodological research strategies. The process of collecting, processing and analyzing qualitative data was performed as summarized in Figure 1.

Bioethical considerations

The study was developed taking into account the guidelines of the Council of International Organizations of Medical Sciences (CIOMS),¹⁵ which sets out guidelines for the implementation of the principles of the Declaration of Helsinki adopted by the World Medical Association in 1964 and amended in 1975, 1983 and 1989. The working protocol was approved by the Advisory Board of the

Figure 1. Process for collecting, analyzing and interpreting qualitative data.

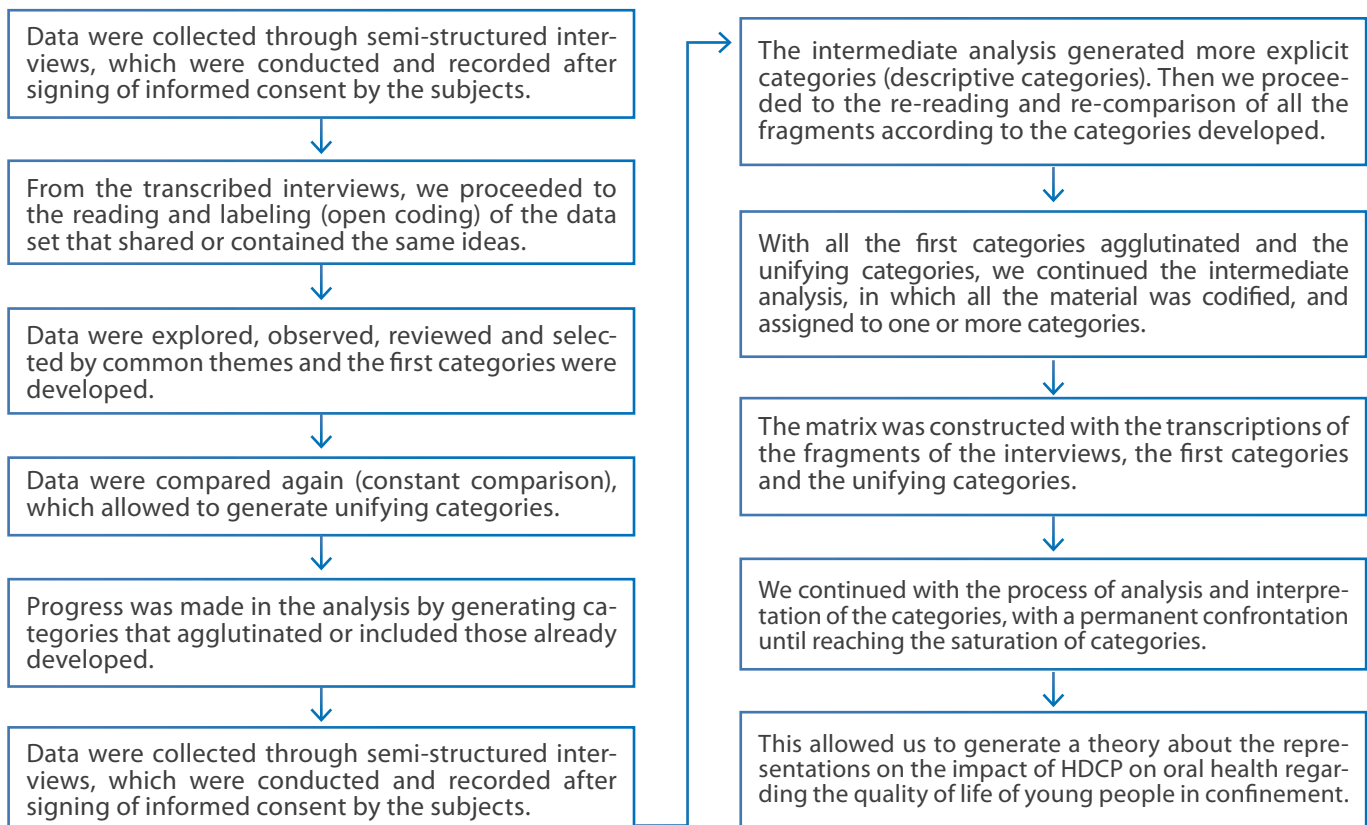


Table 1. Sociodemographic characteristics of the studied population of young people in confinement.

Characteristic		n	%
Sex	Male	66	94%
	Female	4	6%
Age	14 years old	3	4%
	15 years old	5	7%
	16 years old	13	19%
	17 years old	23	33%
	18 years old	26	37%
Place of origin	Capital	48	69%
	Interior regions	22	31%
Educational level	Complete secondary education	0	0%
	Incomplete secondary education	22	31%
	Complete primary education	24	34%
	Incomplete primary education	23	33%
	Illiterate	1	1%
Work history	Yes	48	69%
	No	22	31%
Family type	Lives alone	4	6%
	Stepfamily	13	19%
	Extended family	12	17%
	Couples living alone	1	1%
	Single-parent family	18	26%
	Complete simple nuclear family	20	29%
	Home/Shelter	1	1%
Head of household	Brother/Sister	1	1%
	Others	18	26%
	Brothers or sisters	4	6%
	Mother	25	36%
	Father	23	33%
Occupation of the head of the household	Formal	47	67%
	Informal	23	33%
Educational level of the head of the household	Complete secondary education	12	17%
	Incomplete secondary education	11	16%
	Complete primary education	25	36%
	Incomplete primary education	18	26%
	illiterate	4	6%

PhD Program of the School of Dentistry at Universidad Nacional de Córdoba (UNC).

Population

Adolescents from 14 to 18 years old, confined in socio-educational juvenile detention centers in the Province of Córdoba, Argentina, for a period of not less than six months, who accepted to participate in the study by signing an informed consent. Their socio-demographic profile is shown in Table 1. The impact profile on oral health questionnaire 49 (OHIP-49) was applied to 70 subjects and 32 semi-structured interviews were conducted.

Quantitative evaluation

The Spanish¹⁶ version of OHIP-49¹⁷ consists of 49 questions encompassed in 6 dimensions: functional limitation, physical pain, psychological discomfort, physical disability, social disability and handicap. A Lickert scale was used for its quantification, with values ranging from 0 to 4, where 0 represents the lowest value (never) and 4 the highest one (always).¹⁸ In order to increase the intelligibility of the questions, some expressions were adapted to the sociocultural context of the participating subjects. The questionnaire was previously applied to a pilot group, showing an internal consistency of α Crombach 0.93. In most cases the

questionnaire was answered by the subjects without receiving help from the researcher, with only some needing some help with reading. For the analysis of the OHIP-49 index, an individual count of the score obtained in the answers of the questionnaire (0 to 196) was performed. To determine the impact, the following responses were considered positive: “rarely”, “sometimes”, “often” and “always”; only “never” was considered of no impact. The impact was estimated for each of the dimensions included in the OHIP-49.

Mean±SD were used as measures of centralization and dispersion. The behavior of categorical variables is described by relative frequencies expressed as percentages.

Qualitative evaluation

Semi-structured interviews¹⁹ were conducted in a single moment with each interviewee (28 males and 4 females) and for an approximate time of 50 minutes. Thematic guidelines derived from the objectives and the evolution of the interview were followed. All the interviews were recorded. During the micro-situation, impressions, feelings, attitude and characteristics of the adolescents were simultaneously registered in a field diary. The specific corpus was then obtained after analyzing the transcribed interviews.

Analysis of data was done following the Grounded Theory.²⁰ This theory provides an approach based on the inductive process of analysis, which generates concepts and develops theory from the analysis of empirical data from

Figure 2. OHIP-49, dimensions of greatest impact in the study population of young people confined in juvenile detention centers in Córdoba, Argentina.

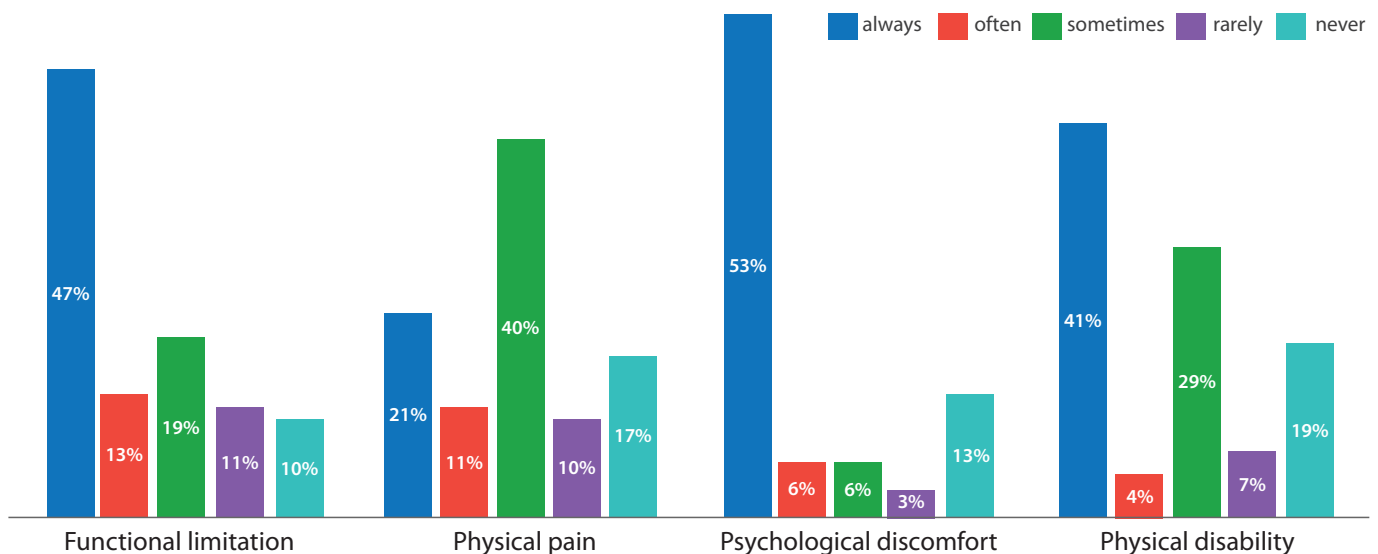
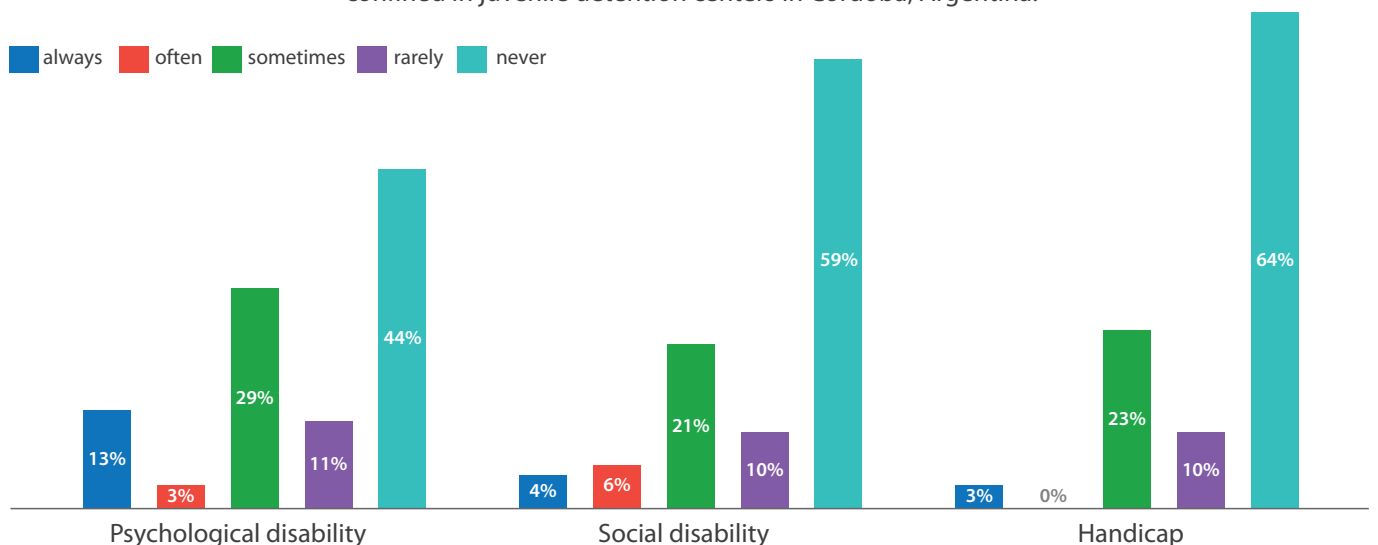


Figure 3. OHIP-49, dimensions of lower impact in the study population of young people confined in juvenile detention centers in Córdoba, Argentina.



the perspective of the intervening actors, allowing researchers to understand an event in the same way participating subjects understand it.

RESULTS.

The mean value of OHIP-49 was 53.37 ± 28.77 points. The greatest impact was observed in the dimensions: psychological discomfort, functional and esthetic concern (functional limitation), dental pain (physical pain), and interruption of meals (physical incapacity) (Figure 2). Questions that showed a lower impact were related to the interruption of nocturnal sleep and presence of discomfort (psychological incapacity) to perform daily activities (social incapacity), and disruption of work tasks (handicap) (Figure 3).

The process of analysis of the corpus allowed the construction of the following categories.

Functional limitations and social roles, attributed to pain, affect the Oral Health-related Quality of Life (OHRQoL)

Participants of this study report that functional limitations related to feeding affect OHRQoL:

"...when I eat like this, I get this little thing in the tooth, I feel uncomfortable, it hurts. I feel that I can't eat well, I'm afraid sometimes of the tooth ache"...(F0008, male, 18 years old).

They also recognize that the limitations in their daily tasks (work, school) affect their OHRQoL, but they do not interfere with their social activities:

"No, I tried to stay at home, take antibiotics, or I didn't feel like going out. When I had to go to work, I used to leave a little later, ... but it didn't affect going out with my friends, I didn't ... although ... -he thinks- but if I really had to go out somewhere, I'd take something, calm down and go out"(D0006, 17 years).

"When it hurt little, it didn't affect me much. And when it hurt a lot, I would stay at home. No, I didn't tell my boss that I was sick and I just didn't go to work and took a day off" (F0008, male, 18 years old).

They report perceiving a psychological limitation to perform their daily chores and roles:

"It's not good, the anger, the rage is due to the pain, the pain itself. There you are somewhere and there is this piercing pain, and you're denying knowing where the money is, where the money is, and then that pum! pam! this freaking piercing

pain in the tooth again just like that, and it makes you want to remove the damn pain with a blow. And then you're trying to deny where the money is and it hurts like hell! You just want to kill 'em (laughs)" (K0022, male, 18 years old).

"No, I don't go out. If the pain goes away, or if I get something and it goes away, I go out, otherwise I don't, because it hurts a lot and it doesn't go away. And I get angry because I want it to end, well, you know."(D0013, male, 17 years old).

Perceptions on the aesthetic appearance of the oral component and level of acceptance

Dental appearance is an aesthetic parameter, which does not influence their self-esteem or social activity.

"I wish all my teeth were extremely white, well, shining white, so when I'd laugh at night they'd shine, and I wish they weren't crooked. Just that, nothing more." (K0022, male, 18 years old).

For some of these young people the loss of front teeth affects their self-esteem.

"Look at me! My teeth are pointing backwards, even one is missing, I'm ashamed to laugh, and they're freaking ugly! And, look at the hole I have here, my sister told me the other day that I was ruined, a wreckage, without this tooth; she even said I had grey hairs in my head." (Mr0001, male, 18 years old).

Others say that in order to avoid the rejection by their female peers, they resort to their communication skills.

"I'm ashamed of having this missing tooth (11), it came out a long time ago, I was little, I fell off my bike. And I hope when I go out with a girl that she doesn't reject me because of the tooth. But in the end it's sweet talking what does it for me, they don't mind the missing tooth." (A0023, male, 18 years).

The properties of the central category Impact of the HDCP regarding oral health on the quality of life are crossed by the emerging transversal categories.

Self-perception of the body in relation to functionality and aesthetics

"What will I know ... Nothing ... It's not the hands. Because I can do things, I have strength ... if I could I would change all my teeth ... Look at me, all teeth pointing backwards, crooked, even one gone missing, I'm ashamed to laugh, they're freaking ugly!" (Mr0001, male, 18 years old).

"It's all the same to me, my body is my body, I was born that way and I'm going to die like this. I would not change

anything”... (N0005, male, 15 years old).

Throughout the process of analysis of the interviews an emergent category was detected, which is transversal to each of the categories already described. This emerging category explains and expands the understanding of the perceptions that young people have regarding OHRQoL while they are in confinement, deprived of liberty.

Being in confinement reveals another reality and amplifies feelings

Confinement appears as a conditioning factor that has two significant characteristics: it reveals another reality, which is different in several aspects for these young people, from their values, emotions, physical experiences and the importance of oral health.

“No, I never cared about my teeth. Now ... what will I know... maybe because I’m in here.” (I0010, male, 18 years old).

And as an amplifier of sensations, pain is the main symptom of the imbalance related to oral health, which causes the impact of HDCP on the oral health of these young people and on their QoL. Confinement would increase and intensify sensations often associated with the inaccessibility to palliative care, to which they had access when they were not confined; or only related to the fact of having easy access to all other types of distractions.

“No, here it seems to me that it hurts even more, because outside it hurt just a little bit. There are more things out there. You buy pills for the pain, you smoke weed, everything (laughs)” (H0002, male, 17 years).

“My teeth ached, they always did. And this tooth - the tooth is pointed - well, it always hurt me; and now what?! When you’re in here it hurts so or more so. And when I’d eat, or drink hot tea or cold water... Everything caused me pain and discomfort, all the time. And during the day the pain just seemed like going away. Always at night, it’s all night, and the pain starts just like that”(D0029, male, 17 years old).

“The toothache, uh! I could not stand it when I was in the streets, you know, free; How will it hurt in here?!” (F0008, male, 18 years old).

“When I’m in the streets, I’m lucky I do not get sick, here inside it’s a complete different story. And I kind of catch a cold everyday, I never got sick in the streets, I do not know if I did not care about it, or it was just because of the drugs,

I say, I did not realize ... I didn’t know the effects of what I was consuming. But a while ago I was also on drugs (pills), then I tried cocaine and then I tried weed. They were kind of stages, so I tried everything.” (I0024, male, 18 years old).

DISCUSSION.

The World Health Organization defines OHRQoL as the individual’s perception of the degree of satisfaction with respect to their teeth, as well as with the hard and soft tissues of the oral cavity in the performance of the daily activities, taking into account their present and past circumstances, their implications for care, expectations and paradigms according to the value system within a particular sociocultural context.²¹

QoL cannot be independent of cultural norms, patterns of behavior and expectations of each subject, so for their understanding this idea of a unique globalized system of values must be left aside to include anthropological and cultural aspects.²²

Young people in confinement perceive OHRQoL when they notice a limitation in their different social roles and functions. Physical pain is primarily responsible for the loss of balance in oral health. It is important to mention that these young people relativize their discomfort using different palliatives, resorting to restricted self-care resources (self-medication or smoking marijuana, among others) so that their priority activities, such as socializing, are not affected.

There is a difference between school or work activities and outings with friends. The subjects manifest different behaviors because if they do not feel good or if a tooth aches or hurts then they do not go to work, or do it later; they miss school, stay at home. This is not the case when outing with friends, because they resort to different methods to relieve pain so that it does not affect their social activities.

Dissatisfaction with appearance, the effect of the malocclusions, are not only functional and/or aesthetic factors, as they also influence psychosocial aspects and QoL.^{23,24} Young people in confinement manifest some type of disconformity with the appearance of their teeth (“crooked teeth”). The color of their teeth (whiteness) would not play a role when relating with their peers and it would not affect their self-esteem. However, the

lack of an anterior tooth makes it difficult for them to relate with their peers, forcing the use of “sweet talking” (communicational ability) to avoid rejection.

The perception of HDCP on oral health shows how a person deals with his/her condition, conditioning the type of help sought. The perception of this complex process responds to an individual and social construction that can only be understood in the context of beliefs, values and the sociocultural environment of each person and also their material conditions of life. Perceptions about dental limitations are influenced by the subjects' self-perception of their own body in relation to functionality and aesthetics. However, their self-perception does not allow them to understand the importance of the level of severity of their caries (DMFT=8.94±4.75), according to previous studies conducted on the same population.²⁵

Triangulation of methods²⁶ provided greater reliability

in the data collection. The emerging categories in the qualitative analysis broadened and complemented the analysis of the information obtained through the questionnaire. This allowed us to understand the reality of these young people from their own point of view, in which the situation of confinement creates a particular context for the sensations and resolutions of HDCP related to oral health, with pain being the main agent responsible for the negative impact on the oral HDCP of this population.

CONCLUSION.

Young people perceive the impact of oral health on their QoL from episodes of suffering, although not only because of pain, but also for aesthetic reasons. Confinement creates a particular context for sensations and resolutions on the health-disease-care process regarding oral health.

REFERENCES.

1. Ferreyra S. Calidad de Vida en Trasplantes de Órganos. Una mirada desde el Trabajo Social. 1st Ed. Buenos Aires, Argentina: Editorial Espacio; 2014.
2. Quiceno JM, Vinaccia S. Calidad de vida relacionada con la salud infantil: una aproximación desde la enfermedad crónica. *Psychol Av Discip.* 2013;7(2):69–86.
3. Menéndez EL. Modelos de atención de los padecimientos: de exclusiones teóricas y articulaciones prácticas. *Ciênc Saúde Coletiva.* 2003;8(1):185–207.
4. Buchanan L. No quiero que me curen, quiero que me entiendan. Cuidados paliativos y determinantes sociales de la Salud. *Rev Margen.* 2012;67:1–18.
5. Sacchi M, Hausberger M, Pereyra A. Percepción del proceso salud-enfermedad-atención y aspectos que influyen en la baja utilización del Sistema de Salud, en familias pobres de la ciudad de Salta. *Rev Salud Colectiva.* 2007;3(3):271–83.
6. Rodríguez M. Componente bucal de la salud en niños con síndrome de Down y retardo mental y su relación con la calidad de vida. Maracaibo, Venezuela: Universidad de Carabobo; 2016.
7. WHOQOL Group. Study protocol for the World Health Organization project to develop a Quality of Life assessment instrument (WHOQOL) *Qual Life Res.* 1993;2(2):153–9.
8. Yiengprugsawan V, Somkotra T, Seubsman SA, Sleight AC. Longitudinal associations between oral health impacts and quality of life among a national cohort of Thai adults. *Health Qual Life Outcomes.* 2013;11:172.
9. Velázquez-Olmedo LB, Ortíz-Barrios LB, Cervantes-Velázquez A, Cárdenas-Bahena Á, García-Peña C, Sánchez-García S. [Quality of life related to oral health in older people. Evaluation instruments]. *Rev Med Inst Mex Seguro Soc.* 2014;52(4):448–56.
10. Hernández-Fernaund E, Hernández B, Ruiz C. Percepción de alteraciones dermatológicas de baja expresión y calidad de vida: el papel mediador del afrontamiento. *Univ Psychol.* 2015;14(2):523–34.
11. Slade GD. Measuring Oral Health and Quality of Life. University of North Carolina-Chapel Hill, North Carolina, USA: Department of Dental Ecology; 1997.
12. Vasilachis de Gialdino I. Estrategias de investigación cualitativa. 1st Ed. España: Editorial Gedisa, S.A; 2006.
13. Ruiz Olabuénaga JI. Metodología de la investigación cualitativa. 5th Ed. Bilbao, España: Universidad de Deusto; 2012.
14. Campos Saldaña RA. El estudio de la calidad de vida desde la mirada de los involucrados la percepción ciudadana. *Rev Legislat Est Soc Opinión Publ.* 2014;7(13):153–77.
15. Council for International Organizations of Medical Sciences. Council for International Organizations of Medical Sciences. *Bull Med Ethics.* 2002:17–23.
16. Lopez R, Baelum V. Spanish version of the Oral Health Impact Profile (OHIP-Sp). *BMC Oral Health.* 2006;7:6–11.
17. Slade GD, Spencer AJ. Development and evaluation of the Oral Health Impact Profile. *Community Dent Health.* 1994;11(1):3–11.
18. Locker D, Miller Y. Evaluation of subjective oral health status indicators. *J Public Health Dent.* 1994;54(3):167–76.
19. Sabino C. El proceso de investigación. 10th Ed. Guatemala: Editorial Episteme; 2014.
20. Strauss A, Corbin J. Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory. 2nd Ed. London, England: Sage Publications, Inc; 1998.
21. The WHOQOL Group. The World Health Organization Quality of Life assessment (WHOQOL): position paper from the World Health Organization. *Soc Sci Med.* 1995;41(10):1403–9.
22. Herrera Castañeda MV. La educación superior como significativa en el trayecto de vida de los jóvenes que ingresan a la universidad. 1st Ed. España: Universidad de Málaga; 2014.
23. de Paula Júnior DF, Santos NC, da Silva ET, Nunes MF, Leles CR. Psychosocial impact of dental esthetics on quality of life in adolescents. *Angle Orthod.* 2009;79(6):1188–93.
24. Rodríguez M, Pellicer G, Domínguez M. Serie de capacitación Integral Autoestima: Clave del éxito personal. 2nd Ed. Mexico, D.F: Editorial El Manual Moderno Ltda; 2012.
25. Barnetche MM, Cornejo LS. [Caries experience and quality of life of confined teenagers]. *Rev Salud Publica.* 2016;18(5):816–26.
26. Okuda Benavides M, Gómez-Restrepo C. Métodos en investigación cualitativa: triangulación. *Revista Colombiana de Psiquiatría.* 2005;34(1):118–24.