



# “I thought I was normal”

## Meanings of weight and bodies in Chilean children.



**Cecilia Prieto Bravo, PhD in Population Health Sciences ©**

Dr Linda Bauld, Dr Nicola Boydell, Dr Jeni Harden\*



# Outline



Introduction and  
context



Main Concepts  
Literature Review



Methods



Analysis



Findings



Preliminary  
Conclusions

# Introduction and Context

Chile: 19,458,310 inhabitants, **62.4% Metropolitan region**, where Santiago, Chile's capital, is situated.

Childhood population **20.1%**, the **lowest rate of childhood mortality** among Latin-American countries.

Neoliberal Economy, OECD country, Chile is one of Latin America's wealthiest countries but also one of its **most unequal**.

**Currently in a democratic referendum process for a New Constitution.**



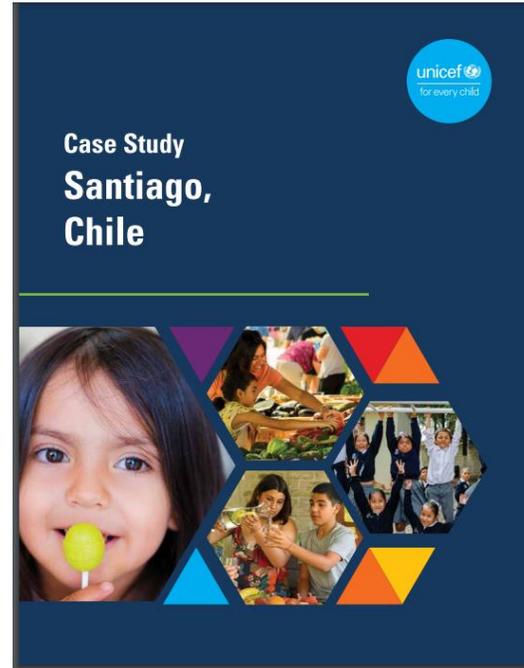
# Introduction and Context

In Chile, 54.1% of children are classified as higher weight\*. However, there is **limited understanding of children's experiences with weight and health-related practices** and how these experiences might inform public health policy.



# Introduction and Context

Catastrophic (biomedical) discourses around the **‘Obesity Epidemic’** or the **‘Burden of Obesity’**



## Chile, an example of aggressive state intervention to combat the obesity epidemic



**Dr Martin Juneau, M.D., FRCP**

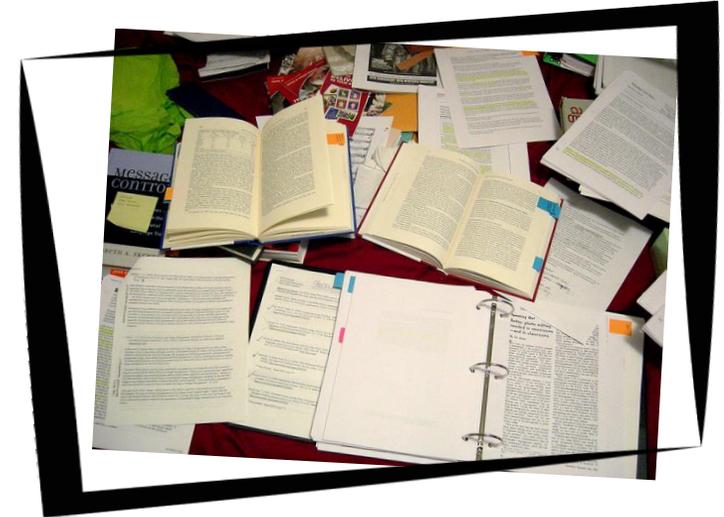
Cardiologue et Directeur de la prévention, Institut de Cardiologie de Montréal. Professeur titulaire de clinique, Faculté de médecine de l'Université de Montréal. / Cardiologist and Director of Prevention, Montreal Heart Institute. Clinical Professor, Faculty of Medicine, University of Montreal.

2 September 2020



# Main concepts – Literature Review

- “Obesity” as a Public Health Challenge
- Social Construction of Childhood Obesity
- Stigma and weight stigma
- Inequality and Intersectionality



(OECD, 2017; WHO, 2018; UNICEF, 2019; Lupton, 2013; Guthman, 2011; Wright, 2009; Evans, 2006; Quirke, 2016; Sanders, 2014; Gard and Wright, 2005; Ebeling, 2014; Oliver, 2006; Goffman, 1963; Link and Phelan, 2001; Scambler, 2009; Puhl and Heuer, 2009; Crenshaw, 1989; Hill Collins, 2016; Eisenmann et al., 2011; Herndon, 2010; Curtis et al., 2011; Boero, 2009)

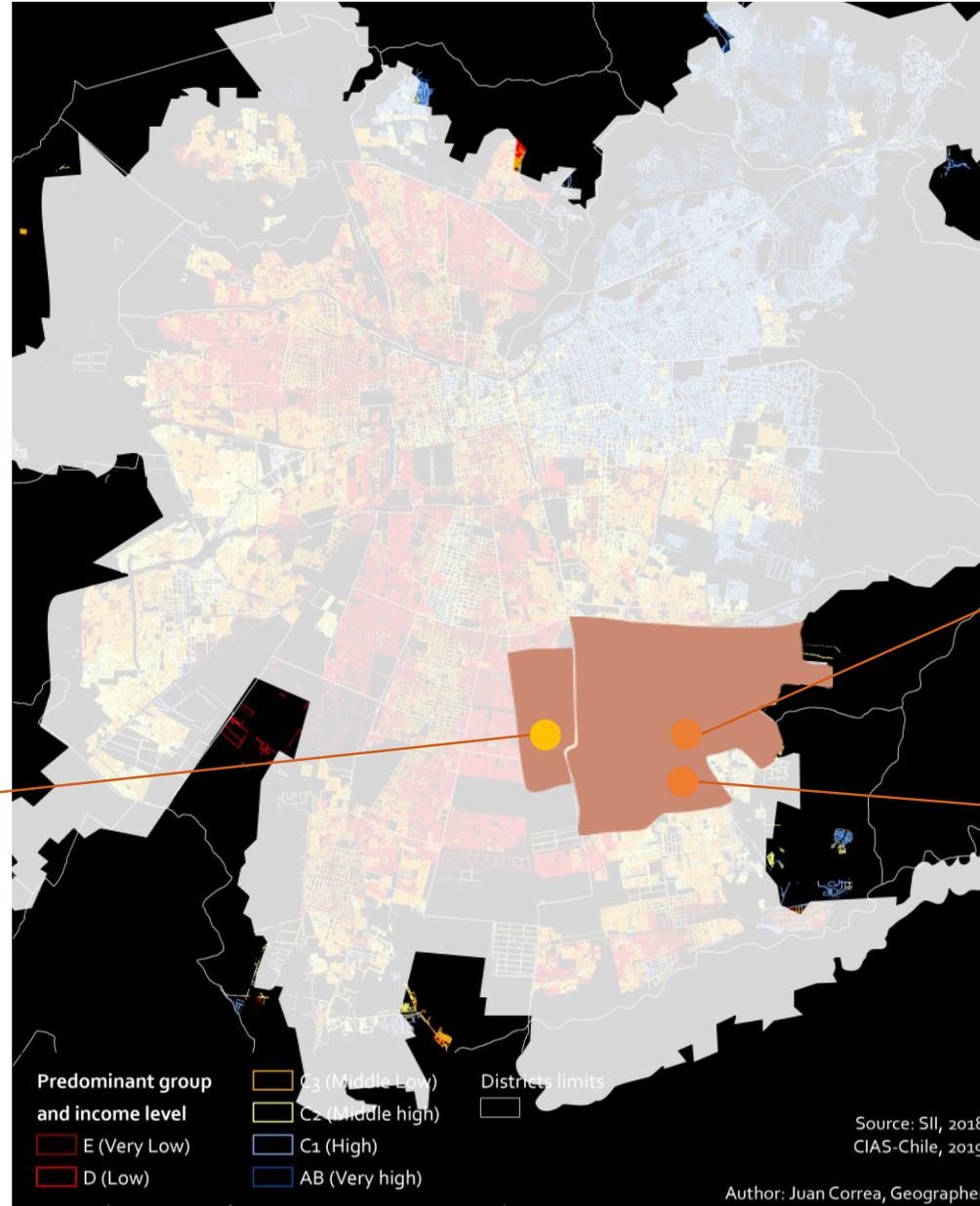


# Research Question

What are the meanings of health, growth and weight for “overweight and obese” children and their caregivers?

# Research Location: Santiago's deprived zones

**La Pintana**  
ANCORA UC CLINIC



**Puente Alto**

ANCORA UC CLINIC

ANCORA UC CLINIC

# Methods

- Qualitative interviews allow us to access children's narratives of bodies and health-related behaviours (Kelly, 2010).
- Interviews are an age-appropriate method to gain information (Christensen and James, 2008) in contrast to the adult-centred view which tends to think that children are incapable of maintaining attention during an interview (Punch, 2002).
- Interviews allow children to relate their experiences and beliefs verbally to an interviewer (Harden et al., 2000).
- The United Nations Convention on the Rights of the Child (UNCRC), children's rights to participate in research.

# Methods - Participants

- I included children to avoid a mediated related experience through adults as other qualitative researchers have criticized (Bushin, 2007, Punch, 2002).
- I recognize children as **social agents of their process and societal changes**. This involves a move of children from objects to subjects of research as active actors in the construction of their experiences, health and life (Punch and Tisdall, 2012, Hunleth, 2011, Christensen and James, 2008, Metcalfe et al., 2008)



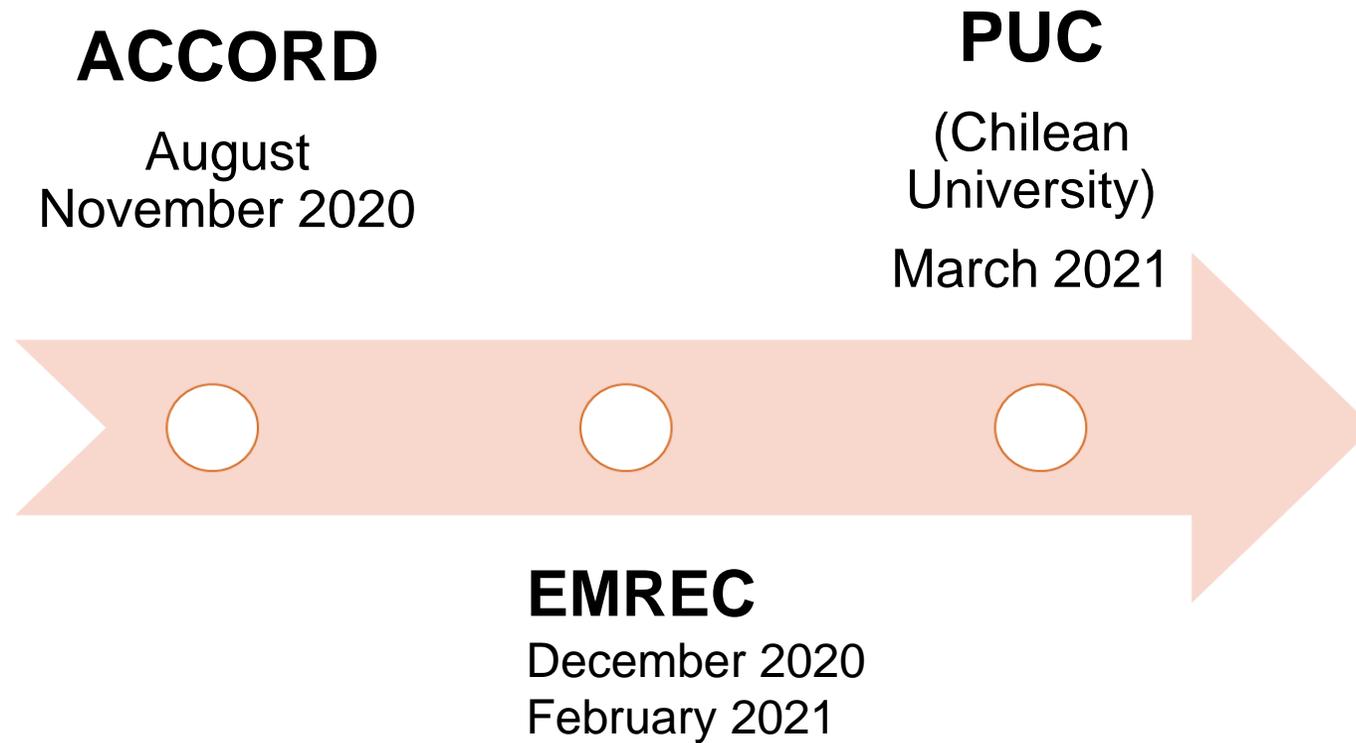
# Methods - Participants

Doing qualitative interviews with children... present different ethical challenges:

- Awareness among researchers of the importance of ensuring an ethical research practice when doing research with children (Alderson & Morrow, 2011). This has led researchers to reflect on a number of ethical considerations when doing research with children.
- Ensuring children's confidentiality, protecting children from harm or abuse and balancing power relationships are three pillars of an ethical research (Alderson & Morrow, 2011).



# Methods – Ethics approval timeline 8 months



# Methods – Ethical challenges

## How to recruit children and where...

- Children 10-12 years old with a 'medical classification' (schools, clinics)
- Covid 19 and the lockdowns – > Clinics 'ANCORA'



# Methods – Ethical challenges

## ANCORA clinics:

- Staff was agreed to help with this study. A GP, was the gatekeeper (3 ANCORA clinics). I met initially and remotely with the ANCORA staff in Santiago (including GP) to discuss the study and ensure they were aware of the aims and inclusion criteria.
- The ANCORA staff was key to communicating the study information to the children and their mother. The study was introduced to the child and mother by their GP or other health professional at ANCORA.

# Methods – Ethical challenges

## Obtaining Contact Details

- Children/mothers attended by the Clinic staff were invited:
  - i) to complete an initial research contact form indicating their agreement to be contacted, along with details of a means of contact or
  - ii) to receive an information pack and contact the researcher directly.
- Parents **informed consent** was required before **children assent** **Challenge: Power negotiations – Listen to children**
- **Challenge: Use of different Informed/Assent Forms** **Comprehensible language (Sanjari et al, 2014)**

# Methods – Ethics – Participant Information

 <p style="text-align: right;">PISCF 11 NOV 2020 v1.0</p> <p style="text-align: center;"><b>Participant Information Sheet</b></p> <p><b>Exploring narratives of body and weight related practices in children living with overweight or obesity and their caregivers.</b></p> <p>You are invited to take part in a research study. To help you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Talk to others about the study if you wish. Contact us if there is anything that is not clear, or if you would like more information. Take time to decide whether or not you wish to take part.</p> <p><b>What is the purpose of the study?</b></p> <p>This study seeks to explore experiences of children with overweight and obesity and their caregivers in Santiago. The findings of this study hope to contribute to recommendations for the interventions or policies for children with overweight/obesity in Chile.</p> <p><b>Why have I been invited to take part?</b></p> <p>You have been invited to take part in this study, because you are a <u>Mother/Father/Caregiver</u> of a child aged 10-12 years and the child has been diagnosed with overweight or obesity, speak Spanish, is Chilean or have been lived 5 years in Chile. We wish to ask you some questions about health-related practices and daily routines of you and your child.</p> <p><b>Do I have to take part?</b></p> <p>No – it is entirely up to you. You have as much time as you want to decide if you would like to take part. You are free to withdraw at any time and without giving a reason. Deciding not to take part or withdrawing from the study will not affect you in any way. If your child is receiving treatment or education, the regular care or service will not be affected as a result of your decision not to participate or to withdraw from the study.</p> <p><b>What will happen if I take part?</b></p> <p>Once you and your child have consented to taking part in this study, you will be asked to provide your email address and/or contact number to schedule an online interview according to your preferences. You will be assigned a unique participant number by the researcher Cecilia Prieto, who use this number to de-identify your personal data. The interview will last around 60-90 minutes. The interview would involve a <u>face-to-face</u> interview with the researcher and can be conducted either at your home, or via online video-call. The interview will be audio-recorded only for the purpose of transcription. During the interview, the researcher will ask you questions about health-related practices (eating, exercising, sleeping) and daily routines of you and your child, body and growth using photos and Chilean videos.</p> <p><b>What are the possible benefits of taking part?</b></p> <p style="text-align: right;">CR007-T03 v5.0 Page 1 of 4</p>	 <p style="text-align: right;">PISCF 11 NOV 2020 v1.0</p> <p>You will be helping the researcher to better understand the meanings of health and body in children and how your daily routines impact on your experiences. This will help to recommend necessary support measures according to relevant health needs, as well as potential policy or interventions for overweight and obesity in children. As a compensation for your and your child's time and internet usage, a 4 pounds 'supermarket voucher' each will be given to you and your child.</p> <p><b>What are the possible disadvantages of taking part?</b></p> <p>Taking your time for one face to face or online interview. You don't need to go anywhere, because the interview will be at home or online. The interview will take around 60-90 minutes.</p> <p><b>What if there are any problems?</b></p> <p>If you have a concern about any aspect of this study please contact Cecilia Prieto Bravo on +5698844607 or email on: <a href="mailto:Cecilia.Prieto@ed.ac.uk">Cecilia.Prieto@ed.ac.uk</a> or Jeni Harden <a href="mailto:jeni.harden@ed.ac.uk">jeni.harden@ed.ac.uk</a> +44 (0)131 850 6901 or Linda Bauld <a href="mailto:linda.bauld@ed.ac.uk">linda.bauld@ed.ac.uk</a> +44 (0)131 850 3213.</p> <p><b>What will happen if I don't want to carry on with the study</b></p> <p>Agreeing to participate in this project does not obligate you to remain in the study. If, at any stage, you no longer want to be part of the study, please tell me (<a href="mailto:Cecilia.Prieto@ed.ac.uk">Cecilia.Prieto@ed.ac.uk</a>).</p> <p>Participation is voluntary and you are free to withdraw your consent to participate in this study at any time. If you decide to withdraw, you will have the option of withdrawal from either:</p> <ol style="list-style-type: none"> <li>All aspects of the study but continued use of the data collected up to that point</li> <li>All aspects of the study with removal of all previously collected data.</li> </ol> <p><b>What happens when the study is finished?</b></p> <p>The results of this study will be summarised in a University doctoral thesis, articles, reports and presentations. Quotes or key findings will always be made anonymous in any formal outputs and you will not be identified in any results from this study or any future publications or presentations relating to this research.</p> <p>If you would like to be informed about the study findings, you will receive a summary of the results via email once the project is completed.</p> <p><b>Will my taking part be kept confidential?</b></p> <p style="text-align: right;">CR007-T03 v5.0 Page 2 of 4</p>	 <p style="text-align: right;">PISCF 11 NOV 2020 v1.0</p> <p>All the information I collect during the course of the research will be kept confidential and there are strict laws which safeguard your privacy at every stage. After finishing the study, all the audio recorded and transcriptions will be securely destroyed.</p> <p><b>How will we use information about you?</b></p> <p>We will need to collect the following personal identifiable information from you for this research project:</p> <ul style="list-style-type: none"> <li>• Full name</li> <li>• Email address</li> <li>• Telephone number</li> <li>• Gender</li> <li>• Age</li> <li>• Ethnicity</li> <li>• Educational level</li> <li>• Marital status</li> <li>• Occupation</li> <li>• Interview data (Views and experiences of body, growth, weight and health-related practices)</li> <li>• Audio recordings of consent for participation in study for video call interviews.</li> <li>• Audio recordings of interviews and de-identified interview transcripts.</li> </ul> <p>The information collected from you in paper copies (i.e. consent forms) and the audio recordings will be stored in OneDrive, a secure and encrypted cloud storage service (and the University of Edinburgh's recommended storage service) and accessed via password protected desktops and an encrypted laptop and it will be kept for 5 years.</p> <p>The data collected from your and your child's during the interviews will be assigned a unique code to de-identify the data and stored on OneDrive, a secure and encrypted cloud storage service (and the University of Edinburgh's recommended storage service) and accessed via password protected desktops and an encrypted laptop. The interview audio recordings will be transcribed by the Researcher and given a unique code to de-identify them. If any unwanted personal information is revealed accidentally during the interviews, it will be removed from the transcripts to maintain your confidentiality. Once transcribed, the audio recordings will be deleted.</p> <p>Only de-identified data will be uploaded to the University of Edinburgh's DataStore. After 5 years, all paper records will be shredded and disposed of securely and electronic records will be permanently erased.</p> <p>If you have any concerns about how we will use your child's information, please contact:</p> <ul style="list-style-type: none"> <li>• The University of Edinburgh Data Protection Officer: <a href="mailto:dpo@ed.ac.uk">dpo@ed.ac.uk</a></li> <li>• Send an email to <a href="mailto:Cecilia.Prieto@ed.ac.uk">Cecilia.Prieto@ed.ac.uk</a></li> <li>• Ring the researcher on +5098844607</li> </ul> <p><b>What will happen to the results of the study?</b></p> <p style="text-align: right;">CR007-T03 v5.0 Page 3 of 4</p>
--	---	---

# Methods – Ethics – Participant Information



Childhood Obesity  
Child PIS\_ 11 Nov 2020 v1.0

### Information Sheet for the Child

Exploring narratives of body and weight related practices in children 'living with overweight or obesity' and their caregivers.

You are invited to take part in a research study. To help you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Talk to others about the study if you wish. Contact me if there is anything that is not clear, or if you would like more information.



What is the purpose of the study?

I would like to find out what it is like being a child who is living with overweight or obesity. Your views and experiences will help us to make decisions about how to improve children's health.



Why I have been invited to take part?

You have been invited to take part in this study because you are between 10-12 years old, and I want to hear from more children about what it is like living with overweight or obesity. I want to know what you think, not what an adult says about you.

CR027-703 v6.0  
Page 1 of 6



Childhood Obesity  
Child PIS\_ 11 Nov 2020 v1.0



Do I have to take part?

No – it is entirely up to you. You have as much time as you want to decide if you would like to take part. You are free to withdraw at any time and without giving a reason. Deciding not to take part or withdrawing from the study will not affect you in any way.



What will happen if I take part?

Once you and your caregiver have consented to taking part in this study, you will be asked take part in an interview with me. The interview will last between 45-60 minutes and I will either come to your home to ask some questions or we can talk on a video-call. During the interview, I will ask you questions about daily routines, health-related practices (eating, exercising, sleeping) body and growth.



What are the possible benefits of taking part?

You will be helping me to better understand the meanings of health and body in children and how your daily routines impact on your experiences. This will help me to recommend necessary support to health practitioners/authorities. You and your caregiver will receive a 4 pounds supermarket voucher each to compensate your time and internet usage.

CR027-703 v6.0  
Page 2 of 6



Childhood Obesity  
Child PIS\_ 11 Nov 2020 v1.0



What are the possible disadvantages of taking part?

Sometimes, talking about some topics might be difficult, but you can stop the interview if you feel uncomfortable.



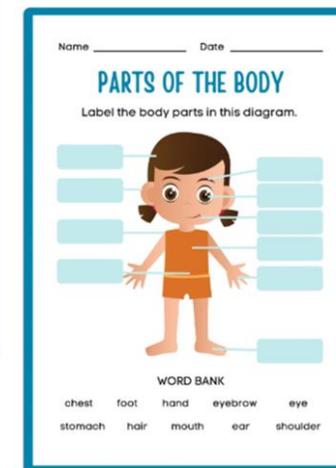
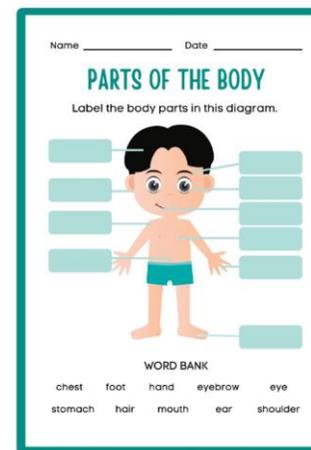
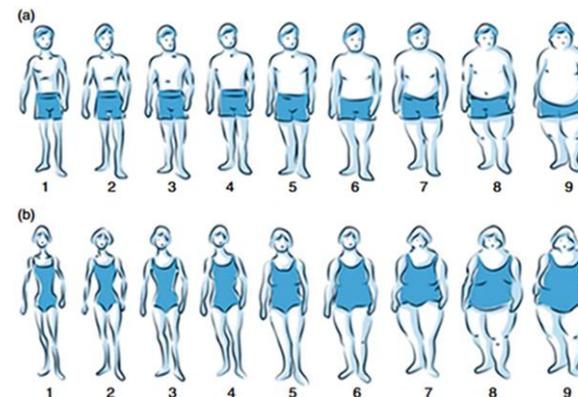
What if there are any problems?

If you have a concern about any aspect of this study, please tell your mother/father/caregiver who will then contact your GP at ANCORA or your teacher at the school who will do their best to answer your questions.

CR027-703 v6.0  
Page 3 of 6

# Methods - Participants

- **Qualitative Study**
- Conducted **during lockdown 2021**
- **34 online semi-structured interviews** were conducted with **children** between 10-12 years **classified** as 'overweight' or 'obese' at ANCORA UC (N=18) clinics and their **mothers** (N=16).
- **Topic Guides (children & mothers)** **Images** were used as prompts.



Body images from the website (Canvas) and Silhouettes (Sørensen, T.I.A. and Stunkard, A.J., 1993), from which children picked the one that best represented themselves and another that represented the 'ideal' body for them.

# Methods - Participants

Está compartiendo la pantalla Deja de

FIGURE 1: Stunkard figure rating scale (22).

# Methods: Table of participants

<b>N°</b>	<b>Mother</b>	<b>Age</b>	<b>Occupation</b>	<b>N°</b>	<b>Children</b>	<b>Age (10-12)</b>	<b>Gender (male-female)</b>	<b>Medical Classification</b>	<b>Place of living</b>
1	Teresa	30	Housewife	1	Santiago	10	Male	Obese	Puente Alto
2	Dalia	32	Social worker	2	Horacio	10	Male	Overweight	Puente Alto
3	Pamela	41	Part time cashier	3	Fernanda	11	Female	Overweight	La Pintana
4	Claudia	44	Dental assistant	4	Mateo	11	Male	Overweight	Puente Alto
				5	Andrea	12	Female	Overweight	Puente Alto
5	Doris	36	Housewife	6	David	12	Male	Obese	Puente Alto
6	Paty	20	Part time worker	7	Carlos	11	Male	Obese	La Pintana
7	Gloria	40	Dog hairdresser's	8	Javi	12	Female	Obese	Puente Alto
8	Gaby	43	Therapist	9	Marcela	12	Female	Obese	Puente Alto
9	Amelia	28	Toll cashier	10	Katherine	12	Female	Obese	La Pintana
10	Amparo	30	Housewife	11	Amelia	11	Female	Overweight	Puente Alto
11	Josefina	43	Housewife	12	Victor	11	Male	Obese	La Pintana
12	Bea	31	Housewife	13	Edson	11	Male	Obese	Puente Alto
13	Sofia	29	Housewife	14	Isa	11	Female	Obese	Puente Alto
14	Belen	47	Housewife	15	Flor	11	Female	Overweight	Puente Alto
15	Javiera	31	Housewife	16	Macarena	11	Female	Obese	Puente Alto
16	Ana	46	Accountant	17	Abi	11	Female	Overweight	Puente Alto
				18	Beto	10	Male	Overweight	Puente Alto

# Analysis: Reflexive Thematic Analysis (Braun & Clarke, 2022)

- “Method for **developing, analysing and interpreting patterns across** a qualitative dataset, which involves systematic processes of data coding to develop themes”
- Recognising “**a reflexive researcher**”.



# Findings: 1) Weight stigma and language

- Weight Stigma & language

The language used by children to describe their bodies differed from those given by the clinicians using medical terminology ('overweight'/'obese'). None of them described themselves as 'obese'.

“

Mateo: I'm a little chubby (male, aged 11)

Carlos: Sometimes I've seen 10 years old who are very little (...) and next to them I'm bigger (male, aged 11)

”



## Findings: 2) Being (over)weight' = Being (un)healthy

The thinnest shape was explicitly associated with being healthy. Most children felt unhealthy only because of their large bodies.

“

Horacio: I'm unhealthy because I'm a little fat  
(male, aged 10)

Katherine: I don't feel healthy because I'm  
very fat (female, aged 12)

”



# Findings: 3) Medicalisation as triggering ideas of abnormality and risk

“ Some of the children's accounts show they thought they were normal until a health professional told them that they need to lose weight.

**Andrea:** They measured me, and weighed me... and in a notebook, they [health professionals] have standards: overweight, normal,... less than overweight... and under weight... they saw my height and my weight, my mass. And then I saw that I was a little overweight.

Cecilia: And how did you feel when they told you that you were overweight?

Andrea: Like... I hadn't realized it because I **thought I was normal.**” (aged 12, overweight)

”



# Findings: 4) Weight Stigma & body image



- Weight Stigma and body image

“

Cecilia: Mm-Hmm, and if we now look at your chest, what emotion would you put on it?

Carlos: Eh, sad (changes the tone of voice)

Cecilia: sad, and why does the chest make you sad?

Carlos: is that there I have like... a lot of chest... like that a lot. (male, aged 11)

”

# Findings: 4) Weight Stigma & bullying

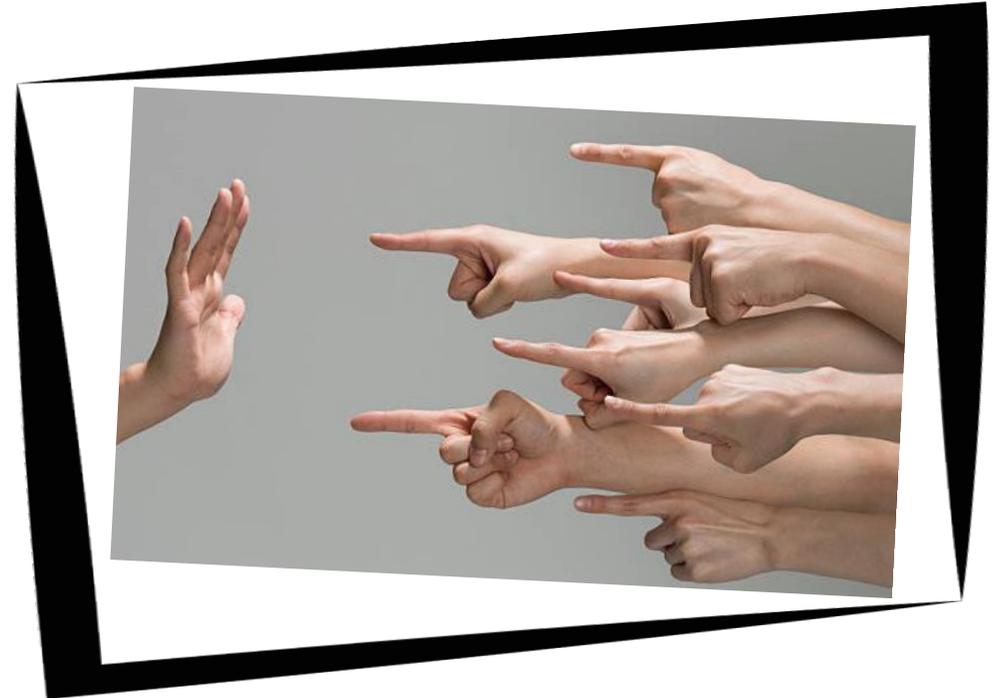
- Weight Stigma & direct stigma

“

Santiago: My mom sometimes calls me fat because she's angry' (male, aged 10)

Paty: Sometimes the cousins annoy him [her son], or sometimes the same adults make jokes like "**oh, you're fat**", and he doesn't like that. And... "**hey, your son is big, he's chubby,**" things like that (...) And I've also had like... erm differences with people because I've told them: please save the comments... eh if you think he's big, fine, but don't comment on his body, please. (Paty, Mother)

”



# Findings: 4) Weight Stigma & bullying

- Indirect weight stigma & power imbalance

“

Fernanda: “(...) sometimes when we played the family role... as I was the largest... they always made me play the mother, with another partner who they didn't want him to play... and the rest were all that they wanted to be, but **they forced me to do what they wanted me to do.**” (female, aged 11)

- Internalised stigma

David: (nervous laugh) that, for example, eh... I'm walking quietly down the street, and people call me fat. I think, they call me ehm... fat because... I don't know why I think so, but I think it's because **I disgust them.** Because they don't want to be next to me or something (male, aged 12)

”



# Findings: 5) The mothers and the associated weight stigma

- Failure and the “associated stigma” - mothers' experiences of having a child diagnosed with overweight or obesity

“

Dalia: frustrating (emphasis) frustrating, yes. I never thought that a son... because... eh... like chubby children are not healthy for me... no... something is wrong there. So **arriving with my son for that issue was like... I don't know if I was a failure as a mom, but... but... I was doing something wrong as a mom.** Well, and his dad. But... but... we understand that something is not being done well... (Dalia, mother)

”



# Preliminary Conclusions:

- Children did not describe themselves with medical labels ('overweight' and 'obese'). The weight stigma associated with those labels made them feel ashamed.
- Medicalised notions of being 'overweight' and 'obese' might contribute with the sense of 'abnormality'.
- Children feel highly stigmatised by their weight and individually responsible for this overweight condition. Stigmatisation is experienced also by mothers.
- These findings might explain the unintended consequences of current Chilean policies to reduce 'overweight' and 'obesity' in children, without improving health outcomes.

# References

- ALDERSON, P., & MORROW, V. (2020). The ethics of research with children and young people: A practical handbook. Sage.
- ARMSTRONG, D. (1995). The rise of surveillance medicine. *Sociology of Health & Illness*, 17, 393-404.
- BACCHI, C. (2012). Introducing the 'What's the Problem Represented to be?' approach. In A. Bletsas & C. Beasley (Eds.), *Engaging with Carol Bacchi: Strategic Interventions and Exchanges* (pp. 21-24). The University of Adelaide Press. doi:10.1017/UPO9780987171856.003
- BRAUN, V., & CLARKE, V. (2021). *Thematic Analysis: A Practical Guide*. London: Sage
- CHRISTENSEN, P. M. & JAMES, A. 2008. *Research with children perspectives and practices*, New York, N.Y., New York, N.Y. : Routledge.
- COHN, S. (2014) From health behaviours to health practices: an Introduction. *Sociology of Health & Illness* Vol. 36 No. 2 2014 ISSN 0141-9889, pp. 157–162 doi: 10.1111/1467-9566.12140
- EVANS, B. (2006) 'Gluttony or sloth': critical geographies of bodies and morality in (anti)obesity policy.(Author abstract). *Area*, 38, 259
- FOUCAULT, M. (1963). *The Birth of the Clinic*, Florence, Florence : Taylor and Francis.
- GOFFMAN, E. (1963) *Stigma : notes on the management of spoiled identity*, London, London : Penguin Books.
- GUTHMAN, J. (2011) Chapter 2: How Do We Know Obesity is a Problem? Weighing in obesity, food justice, and the limits of capitalism. Berkeley: Berkeley :University of California Press.
- HARDEN, J., SCOTT, S., BACKETT-MILBURN, K. & JACKSON, S. 2000. Can't Talk, Won't Talk?: Methodological Issues in Researching Children. *Sociological Research Online*, 5, 1-12
- KELLY, S. 2010. Ch 16: Qualitative Interviewing Techniques and Styles. In: IVYBOURGEAULT, ROBERTDINGWALL & RAYMONDDE, V. (eds.) *The SAGE handbook of qualitative methods in health research*. London: SAGE Publications Ltd.
- LUPTON, D. (2013). *Fat*, Abingdon New York, N.Y. : Routledge.
- MINISTERIO DE SALUD, M. (2010). *ESTRATEGIA NACIONAL DE SALUD Para el cumplimiento de los Objetivos Sanitarios de la Década 2011-2020*.
- OECD (2017) *Obesity Update 2017* [Online]. Available: <https://www.oecd.org/health/health-systems/Obesity-Update-2017.pdf> [Accessed October 15, 2019].
- PUNCH, S. 2002. Research with Children: The Same or Different from Research with Adults? *Childhood*, 9, 321-341.
- PUNCH, S. & GRAHAM, E. 2016. Interviewing Children at Home: Exploring the Use of Individual and Focus Group Interviews. In: EVANS, R., HOLT, L. & SKELTON, T. (eds.) *Methodological Approaches*. Singapore: Springer Singapore
- PUNCH, S. & TISDALL, E. K. M. 2012. Exploring children and young people's relationships across Majority and Minority Worlds. *Children's Geographies: EXPLORING CHILDREN AND YOUNG PEOPLE'S RELATIONSHIPS ACROSS MAJORITY AND MINORITY WORLDS*, 10, 241-248.
- SANJARI, M., BAHRAMNEZHAD F., KHOSHNAVA FOMANI F., SHOGHI M. & CHERAGUI M. (2014) Ethical challenges of researchers in qualitative studies: the necessity to develop a specific guideline. *Journal of Medical Ethics and History of Medicine* 2014, 7-14.
- SOOBRAYAN V. (2010) Ethics, Truth and Politics in Constructivist Qualitative Research. *Westminster Studies in Education*, 2, 26: 107-123
- WRIGHT, J. (2009) Chapter 1: Biopower, Biopedagogies and the Obesity Epidemic. In: WRIGHT, J. H., VALERY, (ed.) *Biopolitics and the 'Obesity Epidemic': Governing Bodies*. New York: Routledge, Taylor & Francis



**Cecilia Prieto Bravo, PhD © in Population Health Sciences**

E-mail: [Cecilia.Prieto@ed.ac.uk](mailto:Cecilia.Prieto@ed.ac.uk)

Twitter: @Cecilia\_PrietoB