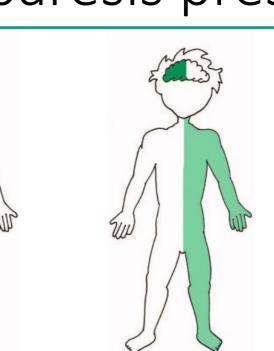
# Daily upper limb use of children with hemiparesis. Perspectives of families through a qualitative study.

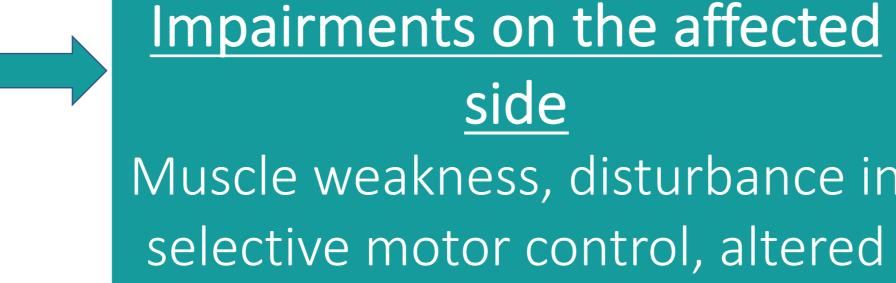
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### Introduction

According to ICF, children with hemiparesis presents





Muscle weakness, disturbance in selective motor control, altered bimanual coordination or reduced spontaneous use.

side

Limitations difficulties in ADL, increased sedentary life or reduced physical activity levels compared with peers.

Restrictions in participation at home, school or community.

Support for participation is a high priority for families

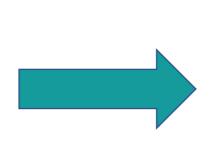
Objective: to know the perspectives of caregivers about daily use of the upper limb of children with hemiparesis through a qualitative study, in order to design a future intervention adapted to them.

## Material and methods

8 families of children with hemiparesis participate in an online semistructured interview. Interviews were recorded, transcribed verbatim, codified and analyzed thematically using Atlas.ti.

### Results

SAMPLE **CHARACTERISTICS** 



Age in months (mean, SD)	57.75±16.7
Distribution of age	n
3 years old	4
4 years old	2
5-7 years old	2

Gender		n
	Boys	4
	Girls	4
Hemiparesis side		n
	Left	2
	Right	6

3 main themes were identified

LIMITATIONS OF SPONTANEOUS USE AND IMPACT ON ADL

- Limitation of mobility as main cause. "It's hard for him to stretch it" "She has no supination"
- Dressing ->commonly require help. "Getting his pants up and down is very difficult for him" "He can't take off his pants, he doesn't have the strength, with help he can, but not alone"
- Bimanual activities -> worse quality and longer execution time. "Buttoning up is still hard. It takes much time and effort" "She uses both hands, but one with assistant role"

CHILD AND FAMILY STRATEGIES TO USE THE ARM DURING **ACTIVITIES AND** ROUTINES

- Reminder, motivation: main used strategies. "If you remind him to use his hand, he immediately integrates it" "As he achive it, it's true that we congratulate him exhaustively"
- ADL usually performed without affected UL. "It's true that he has lot of skill in unaffected UL, and he covers his needs with that one" "She tries everything with her dominant hand to go faster"
- More information, advice: families find it necessary. "It is true that until we went to a private center, we felt very helpless in how to help D. to integrate his affected UL" "Families have concerns, but professionals are needed to be in charge of advising us, I think it is very important even for associations"

USE OF DOMESTIC TECHNOLOGY

- Usually restricted for leisure "We are a bit strict with that issue, because we see that when he has a screen all kinds of creativity disappear" "We try to play with her, tell her stories, and we only use it at specific times"
- Well considered as a therapeutic tool. "If you use it well, it is there to help" "We think it's a good instrument for her to play and even be able to work with CIMT."
- Children enjoy techological use. "Yes, of course, she likes the tablet" "He enjoys and has a good time with technology"
- Barriers to its use with affected upper limb. "She takes command but he doesn't have enough skill" "He isn't able, he doesn't have the strength to hold down and use the other hand at the same time"

#### Relevance for users and families

Children with hemiparesis have limitations to use the affected UL in ADLs, increasing "non-use". Families need support to apply new strategies to increase the spontaneous use, improving their involvement in bimanual ADLs.

More data are being collected. Next phases will focus on studying new strategies to address child and families' needs and to diminish the impact of the non-use of the more affected arm in bimanual activities during daily life.

Grant PID2021-1267820A-I00 funded by MCIN/AEI/ 10.13039/501100011033 and by "ERDF A way of making Europe"

Project approved by the Research Ethics Committee of Universidade da Coruña (2022-002), on 9/3/2022.













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