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Parent attitudes to using technology with children with autism in the home: a comparison of the UK and Spain

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With thanks to all the participating parents, and the groups who facilitated translation and circulation of the survey

Parent Attitudes to Using Technology with Children with Autism in the home: a Comparison of the UK and Spain

Background

- People with autism of all ages are often confident, skilled and prolific users of technology [1]
- Evidence shows technology can be beneficial in supporting education and delivering therapeutic content [2]
- However there are concerns among parents (within and outside the autism community) about the appropriate technology 'diet' for their children
- We require an evidence base on which to establish guidelines for the most effective and enjoyable use of technology by autistic children
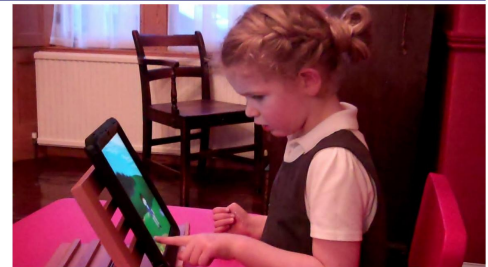
Objective: to survey the experiences and attitudes of parents of children with autism to technology use at home, comparing perspectives between the UK and Spain

Methods

An online survey in English and Spanish gathered parent responses to questions about:
- Family demographics and characteristics of children (Table 1)
- Hardware and software owned and used (Figure 1)
- Attitudes to technology

Table 1: Participant Characteristics

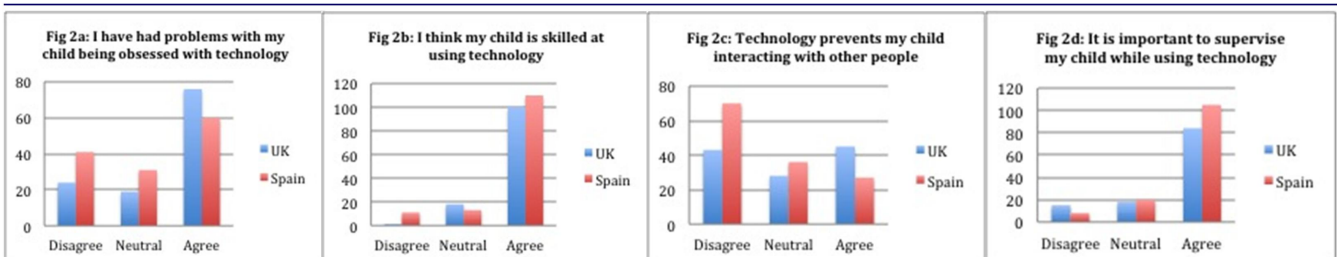|	UK n=142	Spain n=158	Comparison
Parent Age *(yrs)*	41.5 (12.5)	44.5 (13.9)	$t_{(298)}$ = 1.92, p=.056
Parent Gender, f:m	84%: 12.5%	74%: 25%	
Parent Education *(age when left)*	19.4 (3.5)	23.4 (5.4)	$t_{(298)}$ = 7.32, p<.001
Child Age *(yrs)*	10.8 (5.8)	9.5 (7.3)	$t_{(298)}$ = 1.76, p=.079
Child Gender, f:m	15%: 77%	15%: 76%	
Child diagnosis			
Autism	65%	46%	
Asperger's syndrome	25%	16%	
PDD-NOS	2%	23%	
Other / not diagnosed yet	8%	15%	
Child language			
Minimally verbal	13%	25%	
Simple	15%	29%	
Complex	72%	46%	
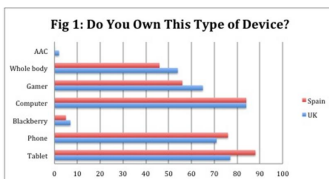
Results: hardware access

Fig 1: Do You Own This Type of Device?

- Children had access to a wide variety of technologies, averaging 4.5 devices per household in both UK and Spain
- Apple tablets and phones (iPad, iPhone) were twice as popular as other brands, again in both

Results: predictors of 'technology time'

- Children in the UK used technology on average for 169 minutes per day across all devices owned, but the Spanish average was 108 minutes (sig. diff.: $t_{(298)}$ = (3.78), p<.001)
- Regression indicates that technology time is predicted by: Child's age (p=.04) and Child's language level (p=.058) but also by Country (p=.055)
- Older children and children with more complex language use technology for longer periods

Fig 2a: I have had problems with my child being obsessed with technology

Fig 2b: I think my child is skilled at using technology

Fig 2c: Technology prevents my child interacting with other people

Fig 2d: It is important to supervise my child while using technology

Results: attitudes to technology

- All parents agree technology 'makes life easier' but parents in Spain have more positive attitudes to technology
- While 'technology time' predicts variability in some attitudes, Country is also an independent predictor of attitudes
- This may be partially explained by different attitudes to supervision (Fig 2d) as well as by societal differences

Conclusions

- Parents report widespread access to technology by their children with autism, and high rates of daily use
- Data not shown here indicate that the most popular uses of technology are 'mainstream' games and watching TV or films
- Parents have mixed feelings about technology, reporting positive impact on family life and high levels of skill, while also having concerns about obsessive behaviour, and conflict with 'real world' interaction
- National differences suggest that parental attitudes to technology are partly shaped by society
- Results support development of autism-specific guidelines to maximise benefits of technology time for autistic children [3]

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2. Fletcher-Watson, S. (2014). A targeted review of computer-assisted learning for people with autism spectrum disorder: Towards a consistent methodology. *Review Journal of Autism and Developmental Disorders, 1(2)*, 87-100.
3. Fletcher-Watson, S. (2014). *Technology and Autism: Guidelines for Parents.* Available for download at www.dart.ed.ac.uk