

## Effect of obesity in Independence and balance in people with intellectual disability

Cuesta-Vargas AI<sup>1</sup>, Pérez-Cruzado D<sup>1</sup>, Gonzalez-Sanchez M<sup>1</sup>, Merchan-Baeza JA<sup>1</sup>, Roldan-Jimenez C<sup>1</sup>, Rodriguez –Moya A<sup>2</sup>, Paz-Lourido B<sup>2</sup>.

<sup>1</sup> Universidad de Málaga, Departamento de psiquiatría y fisioterapia.

<sup>2</sup> Special Olympics España

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### Background

People with obesity often have problems with postural control. Some studies show that people with intellectual disabilities (ID) have a higher likelihood of having falls than the general population, with a prevalence in adults of between 29% and 70% (Cox et al., 2010). Currently, there are no studies that show the effects of obesity on independence and balance in people with ID. The objective of our study is analyse, in people with ID, the degree of influence that obesity has on independence with regard to activities of daily living, static and semi-static balance. Therefore, we can compare two groups: obese people and non-obese people. Our hypothesis is that obesity will exercise a negative influence on static and semi-static balance as well as on independence and the development of the activities of daily living.

### Method

In a cross-sectional study, we compared static and semi-static balance in two groups of people with ID: the obese and the non-obese. All those in the sample had a low ID (IQ: 70-50) to mild ID (IQ 50-35). To measure balance we used a single leg balance test (SLBT) with opened eyes and closed eyes, and a functional reach test (FRT). In order to measure levels of dependence we used a Barthel index. The outcome variables were: time in balance in SLBT open eyes/closed eyes), maximum range of FRT and Barthel index.

### Results and Discussion

We found significant differences in all outcome variables between two groups. To our knowledge, this is the first study to analyze how obesity affects independence, static balance and semi-static balance in people with ID. However, other studies have analyzed the effects of obesity on the general population (Singh et al., 2009). In both studies (General population: Singh et al. 2009 and people with ID in this study) we observed that obesity can be a determinant of negatively static balance and semi-static balance.

### Conclusion

The main conclusion of this study is that obesity has a negative effect on independence, static balance and semi-static balance in people with ID. These results would have been carried out when we carry out an intervention on people with ID to prevent falls.

## References

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\* Correo electrónico del autor para correspondencia: [acuesta@uma.es](mailto:acuesta@uma.es)