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# Impact of Socioeconomic Status on Adherence to Home Exercise Programs among Children

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## Case

A 6-year old boy diagnosed with Cerebral Palsy is receiving occupational therapy services to increase independence during daily activities. He has been given a home exercise program with stretches and exercises for him to complete daily. He comes from an under-resourced family who is struggling financially. The OT is interested in understanding the relationship between socioeconomic status and overall adherence/effectiveness of the home exercise program.



## 1 Ask: Research Question

To what extent does socioeconomic status (SES) impact overall adherence and effectiveness of occupational therapy home exercise programs for children and their caregivers?

## 2a Acquire: Search

Databases: PubMed, ClinicalKey, Google Scholar, Science Direct, ProQuest Health and Medical Complete.

**Patient/Client Group:** Children with a variety of diagnoses and their parents.

**Intervention:** Home Exercise Program (HEP)

**Comparison:** Families who are not of low SES

**Outcome(s):** Carryover and effectiveness of HEP.

## 2b Acquire: Selected Articles

**Basaran, Darakdavut, Uneri, Balbaloglu, & Atasoy (2014):** A cross-sectional study design defined features that impact the adherence to HEPs among caregivers of children with cerebral palsy (CP).

**Oates (2015):** A case-control study investigated whether Cystic Fibrosis (CF) patients of higher SES have better adherence rates than patients of lower SES. It aims to discover whether the positive correlation between SES and CF outcomes will decrease when controlling for adherence.

**Carr, Shih, Lawton, Lord, King, Kasari (2015):** A multi-site randomized control trial that examined the impact that low SES and high parent stress have on adherence, attendance, and outcome of Autism Spectrum Disorder (ASD) treatments.

## 3a Appraise: Study Quality

**Basaran, Darakdavut, Uneri, Balbaloglu, & Atasoy (2014):** Level IV, n=147, Age Range: 2-18 years. Strengths: reliable assessment measures, diverse sample group, use of statistically significant univariate tests. Limitations: reliant on self-reports, not longitudinal, other variables not considered.

**Oates (2015):** Level IV, n= 161, Age Range: 6-18 years. Strengths: longitudinal, reliable measures, extensive amount of information and calculations. Limitations: Not randomized, based on self-reports, small sample size.

**Carr, Shih, Lawton, Lord, King, Kasari (2015):** Level II, n=87, Age Range: 2-5 years. Strengths: longitudinal, reliable measures, RCT. Limitations: small sample size, missing variables, lack of variance across sites, no follow-up with families who discontinued treatment.

## 3b Appraise: Study Results

**Basaran, Darakdavut, Uneri, Balbaloglu, & Atasoy (2014):** SES was not found to be significantly related to adherence to HEPs among children with CP.

**Oates (2015):** There is a link between SES to health outcomes and adherence to therapy. More maternal college experience and higher annual household income positively impacted adherence to HEPs.

**Carr, Shih, Lawton, Lord,**

**King, Kasari (2015):** SES did not predict caregiver adherence ( $p=0.259$ ). Predictors of higher adherence included families receiving group treatment sessions ( $p<0.001$ ), higher experience of parenting daily hassles ( $p=0.003$ ), and having children with lower nonverbal intelligence quotient scores ( $p<0.05$ ).

## 4 Apply: Conclusions for Practice

Studies show varying results regarding the extent of the relationship between caregiver SES and treatment adherence to HEPs. In two studies, SES was not a significant predictor of treatment adherence. In the third study, the author concluded that patients with higher SES have higher adherence rates than patients of lower SES. A lack of research exists regarding the effectiveness of HEPs in regard to SES. Further research, with more rigorous methodology, is needed to determine a causal relationship between income and client adherence to HEPs.

## References

Basaran, A., Darakdavut, K. I., Uneri, S. O., Balbaloglu, O., & Atasoy, N. (2014). Adherence to home exercise program among caregivers of children with cerebral palsy. *Turk J Phys Med Rehab*, 60, 85-91. doi: 10.5152/tftrd.2014.60973

Carr, T., Shih, W., Lawton K., Lord, C., King, B., & Kasari, C. (2015). The relationship between treatment attendance, adherence, and outcome in a caregiver-mediated intervention for low-resourced families of young children with autism spectrum disorder. *Autism*, 20(6).

Oates, G. (2015). *Socioeconomic status, adherence to therapy, and health outcomes in pediatric patients with cystic fibrosis* (Doctoral dissertation). University of Alabama at Birmingham, Birmingham, Alabama. Retrieved from [http://www.mhsl.uab.edu/dt/2015/Oates\\_uab\\_0005D\\_11583.pdf](http://www.mhsl.uab.edu/dt/2015/Oates_uab_0005D_11583.pdf)

The findings examining the relationship between SES and treatment adherence to Home Exercise Programs are mixed. A causal relationship cannot be determined.

