Student Clinician Knowledge of Autism Spectrum Disorder: A Rapid Scoping Review

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Objective:

The purpose of this study is to map the current research that investigates the knowledge medical students, resident physicians, physician assistant (PA) students, and nurse practitioner (NP) students have of autism spectrum disorder (ASD), ASD diagnostic criteria, and common interventions that can be used with individuals with ASD. The results of this study will help identify gaps in the literature and can inform future studies.

Method:

A standardized search term was used across all three of our included databases. The search term attempted to capture articles that addressed autism spectrum disorder (ASD), the correct population (i.e., medical students, residents, PA students, and NP students), and the measurement of ASD knowledge or interventions aimed at increasing knowledge. A time restriction was set to 2013, as this is the year that the Diagnostic and Statistical Manual, 5th Edition (DSM-V) was published (American Psychiatric Association, 2013). The following search term was used:

> Autism AND (medical OR physician OR "physician ass*" OR "nurse practitioner" OR resident) AND (student OR trainee OR resident OR intern) AND (knowledge OR education OR training OR instruction) AND (criteria OR diagnostic OR evaluation OR identification)
>
> Additional filter: Year = 2013

The search term was used in three databases which returned the following results: (a) CINAHL-37 results; (b) PsycInfo- 134 results; and (c) PubMed- 349. A total of 520 articles were retrieved between all the databases and 56 articles were identified as duplicates.

Our inclusion criteria consisted of the following:
- Population: medical students, residents, NP students, or PA students
- Intervention: the article measures knowledge of ASD and/or diagnostic criteria or describes an intervention that seeks to increase knowledge of ASD and/or diagnostic criteria.
- Published on or after 2013 (DSM-V publication: 2013)
- English OR Spanish Language
- Publication of empirical study (quantitative or qualitative) or literature review

Title and abstract screening resulted in 69 articles progressing to full text screening. Of the 69 articles, 16 could not be retrieved and 35 articles were excluded for the following reasons: wrong publication type (7); wrong population (23); wrong outcome (4); and foreign language (1).

Data Extraction

Used an Excel spreadsheet to document the type of articles, the population of the students, the type of education, and the method for measuring knowledge of ASD. Data was coded with a 1/0 measuring system and with a written description of the article.

Results/Conclusion:

This preliminary study shows that more work needs to be done in future medical clinician knowledge of ASD and ASD criteria. Most articles included a qualitative component. While this can be helpful in understanding the nuances of the topic, qualitative research would not allow us to quantitatively measure how effective lessons at increasing knowledge. Additionally, the prevalence of rating scales, as opposed to more objective measures like examinations or direct observation methods, could misrepresent to what extent interventions lead to changes in knowledge or practice. Direct observations, such as evaluating clinical decision making through case studies or clinic observations, or examinations could better represent how a medical provider applies knowledge in clinical contexts.

This study contained limitations. Due to time constraints, certain procedural safeguards for inclusion, exclusion, and coding were not able to be followed (i.e., a robust inter-rater reliability procedure was unable to be followed and a system of spot-checks were used instead).

Future research could explore ways that medical student, resident, and NP/PA student knowledge of ASD can be measured using direct assessments and validated measures of knowledge.

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