



Findings from a Systematic Literature Review of Evidence-Based Practices Used in School Settings to Support Autistic Students with Social Communication Competency

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Abstract

In education research, there is a firm belief that appropriate practices recommended for teachers of autistic children should have a research base, with evidence of their effectiveness to show what works effectively for autistic children [1]. Such practices are termed evidence-based practices (EBPs). Despite the promotion of EBPs in special education, there remains a prominent gap in the availability and commitment to reliable implementation of effective EBP models for autistic children [2]. Furthermore, there exists a need to highlight EBPs implemented in real-life educational settings, ones that address core features of autism and promote positive outcomes [3]. When we consider that children spend most of their days at school, it is therefore crucial to identify EBPs for autistic children that are acceptable and feasible for teachers to implement [2]. Education research based on autism has produced a wealth of information in recent years, however, much of the research has been conducted in and reported from clinical settings, which are removed from the daily experience of the school-going autistic child [4]. This paper specifically reports on some findings from a systematic literature review which captured research specifically focused on interventions for Social Communication Competency (SCC) for autistic children.

Keywords: *Autism, evidence-based practices, special education*

1. Introduction

The National Council for Special Education (NCSE) in Ireland commissioned a systematic review in 2016 aimed to document up-to-date evidence of the intervention supports for autistic children highlighted in the literature [5]. The report built on previous work undertaken as part of an international review of the literature of evidence of best practice provision in the education of persons with autism [6], also commissioned by the NCSE. Outcomes from both reviews provided significant evidence of limited research into interventions in mainstream school settings [5] and highlighted that within these settings, interventions must be driven towards developing SCC as a priority. The 2016 review also noted that the disparities highlighted by the earlier review [6] were still evident after seven years and expressed disappointment that commitment to addressing these disparities did not come to fruition [6]. Literature reviews concerning EBPs identify studies that provide the basis for using specific interventions and represent a mechanism to promote the adoption of such methods into practice [5] [6] [7]. Recent education research based on autism has produced much information but the studies are reported more frequently from clinic-based settings which are divorced from the daily experience of young autistic children in their schools [4]. An impetus exists to seek out appropriate contexts for teaching SCC as it is particularly ill-suited to learning in clinical settings alone [8] as it is more beneficial to promote the power of exercising an autistic child's natural interest to learn within an inclusive classroom setting [9]. This paper reports on one of the findings that emerged from a systematic literature review that built on the NCSE systematic reviews noted above but refined the search to make it more applicable to in-school interventions for SCC for young autistic children.

2. Objective

The systematic synthesis of educational literature is the development of a formal set of processes for bringing together different types of evidence so that researchers can be transparent in what is known from research and clear about the knowledge source [10]. The objective of the systematic

review was to analyse current and previous research on school-based interventions designed to increase SCC for autistic children, as used by teachers. A systematic review was conducted of all published studies and the focus was placed on the intervention packages that are specifically supportive of SCC within the parameters set out for the review. These parameters were set down a priori using the Population, Intervention, Comparison, Outcomes, Context (PICOC) model [11] with each component addressed in the search terms. Once the initial key word search had been completed and relevant literature sourced, the next stage involved the application of predetermined inclusion and exclusion criteria. These criteria were developed based on appropriate material to answer the research question and included elements of study type, outcome, intervention, language, publication date, participant characteristics and location. Following this process, the identified studies were judged based on an established rubric which had been previously validated [5] which was then appraised using the Weight of Evidence (WoE) Framework [10] which includes scoring and criteria.

3. Methodology

The systematic review set out to source effective EBPs for teaching SCC to autistic children aged between four and eight years in early years classrooms and to determine social competency components that should be incorporated into the design of school-based interventions for young autistic children. Literature searches were undertaken from May to September 2019 across the following online databases: EBSCO host (EBSCO 2020), Academic Search Complete (EBSCO 2020), Proquest (Cambridge Information Group 2020), ERIC (Institute of Education Sciences 2020), Web of Science (Clarivate Analytics 2020), Scopus (Elsevier 2020) and PsycInfo (American Psychiatric Association [APA] 2020). In addition, web searches were undertaken using Google Scholar (Google 2020), the NCSE research database (NCSE 2020) and the National Database for Autism Research Autism (National Institutes for Health 2020) to catch literature relevant to the Irish context. To keep the review broad in the initial search, there was no restriction on the types of study that were included. In total, 4,291 documents were identified for the review across all the different databases. These were then screened for applicability and one hundred and five articles were assessed using the inclusion and exclusion criteria. Twenty-four articles were then assessed for quality using a rigorous assessment rating drawn from the NCSE review [6] and their applicability to the research was judged using Gough's WoE Framework [10]. In the review, a study was included if it obtained at least a medium score in terms of quality of evidence, methodological appropriateness and effectiveness of intervention. Studies scoring below medium in any category were deemed too low to be EBPs, following the WoE guidelines [10], and were therefore deemed unsuitable for this review. A total of twenty-four studies were analysed. Eighteen studies were of a suitable calibre for inclusion. Six studies were deemed too low and five studies were rated high overall.

4. Findings

The review noted the low number of high-quality, applicable studies that were researched in schools, that could be included for analysis, as much of this research takes place in clinical settings. However, it also served to provide evidence of proven strategies to inform a school-based SCC intervention. For the purpose of this paper, peer-mediation is discussed. Peer-mediation involves training peers to encourage autistic children to participate socially and communicate with age-appropriate peers during school. The role of peer-mediated instruction featured in 25% of the studies included, with the importance of peers featuring in eleven out of the eighteen studies. According to the studies reviewed, peers played a significant part in the school-based interventions and their roles varied from being trained as instructors [3] to participating in social skills groups [12], supporting naturalistic intervention [13] and generalising skills learned [14]. One of the studies compared the results of SCC learning between one-to-one instruction with a teacher and peer-mediation with the latter producing more successful results [3]. Findings from the review showed that peer-mediated instruction was a versatile support and used to target a range of different competencies. The role of peers was highlighted in the review, overall, as a valuable asset for schools that could feature in the design of programmes that support autistic students developing SCC, with appropriate training for effective implementation a strong recommendation.

5. Conclusion



Although research in the field of autism intervention has repeatedly highlighted the need for teachers to design SCC interventions around established EBPs [5], disparity continues between research and practice when it applies to the classroom [13]. The educational setting of the school offers unique opportunities to teach autistic children, and their typical peers, to become sensitive and helpful towards each other [3]. This review has provided evidence to support the development of a school-based SCC intervention for autistic children, one that can be applied in Irish classrooms by primary school teachers. The finding reiterates that the most important setting for school age children to develop SCC with peers is usually the classroom and school yard and instruction must occur within the natural social environment that the child is familiar with [15]. Furthermore, the findings from the review postulate that in terms of peer-mediation, teachers and staff should be trained as mediators for such a model to be a success but overall it can lead to significant positive outcomes in social connections between peers and autistic children in their classrooms, and the learning lasts over time [3]. Highlighted from the overall review is the importance of strengthening the school-research partnership to develop robust EBPs that are focused on the participants, i.e., autistic children, and the contexts they experience. The findings which have emerged are relevant to key stakeholders involved in the design, delivery and promotion of EBPs to support autistic children, in the ever changing and diverse education system, in Ireland today.

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