Autism Spectrum Disorder – Empowering and Supporting Teachers (ASD-EAST): developing teacher education about ASD for primary teachers

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Summary

Effective education is a crucial intervention for children with autism spectrum disorder (ASD) and it is vital that teachers are confident and appropriately skilled. However, a significant shortfall has been identified regarding teacher confidence and skills, both globally and more specifically regarding Central/Eastern Europe and the Balkans. To begin to address this shortfall, a two-year multinational project was established to develop, deliver and evaluate teacher education in ASD in three countries: Croatia, Poland and the Republic of North Macedonia. Following extensive scoping, a 12-hour training programme was developed and delivered to 259 mainstream and special school teachers across these countries. The programme was evaluated using both quantitative and qualitative methods. This paper describes and discusses the project and presents findings regarding the Republic of North Macedonia. Problems regarding knowledge and confidence are discussed, and benefits of the ASD-EAST programme are identified. It is argued that effective, ongoing teacher education must be provided to ensure aspirations and policy decisions regarding educational inclusion are realistic, and so that teachers may have the knowledge, skills and confidence to turn rhetoric intro reality.

Introduction

Children and young people with autism spectrum disorder (ASD) have specific, special needs due to their characteristic communication and social difficulties, inflexibility and sensory processing issues. Education is a key intervention, and meaningful access to effective education is crucial (Simpson *et al*., 2011). However, due to the diverse nature of ASD, no one educational intervention or approach is effective for all individuals and teachers need a range of skills and strategies (Iovannone *et al*., 2003) at their disposal.

Problems exist regarding skills, knowledge and expertise of educators supporting children with ASD across both mainstream and special education settings (Marshall and Goodall, 2015; Sekušak-Galešev *et al*., 2015). A particular shortfall exists within Central/Eastern Europe and the Balkans, where recent legislation is promoting fully inclusive education (Bukvić, 2014; Starczewska *et al*., 2011; Trajkovski, 2017). While undoubted good practice exists, there are also significant training and developmental needs.

The ASD-EAST project

To begin to address these needs, a multi-national partnership established the Autism Spectrum Disorder – Empowering and Supporting Teachers (ASD-EAST) project. This two-year project (September 2018 – August 2020) was funded by the European Commission's Erasmus+ programme to develop, deliver and evaluate education in ASD to specialist educators from mainstream and special education primary schools in Croatia, Poland and the Republic of North Macedonia. The partnership comprised universities, schools, trainers and non-governmental organisations from Croatia, Poland, the Republic of North Macedonia, Belgium and the United Kingdom, and was coordinated by the University of Northampton, UK. The project's objectives were:

- to scope good practice and areas needing development with regard to the educational inclusion of children with autism in Croatia, Poland and the Republic of North Macedonia
- to develop a model training programme and materials for specialist educators supporting the educational inclusion of children and young people with autism in these countries

- to use the materials to pilot the training programme with specialist educators from mainstream and special schools across Croatia, Poland and the Republic of North Macedonia
- to evaluate the appropriateness and effectiveness of the materials and the impact of the training, sharing findings with key stakeholders and policy-makers.

Methodology

To assess the project, a rigorous mixed methods, evidence-based project and programme evaluation methodology was utilised (Palaiologou *et al.*, 2016; Royse *et al.*, 2016), incorporating quantitative and qualitative methods. Initial scoping was undertaken by means of a review of the literature; an internet search regarding (a) training regarding ASD and (b) policy and practice in Croatia, Poland and the Republic of North Macedonia; a survey of specialist educators in the three countries; and focus group interviews with specialist educators in Zagreb, Kraków and Skopje. The programme, materials and pilot training workshops were evaluated via pre-training, post-training and follow-up questionnaires completed by teachers who attended the workshops, and individual interviews with a sample of teachers from each country. Quantitative data were subjected to statistical analysis using SPSS; qualitative data from the focus groups and individual interviews were subjected to content analysis utilising a matrix approach (Gillham, 2000). Further data for project evaluation were collected from attendees at the project's virtual online conferences, training teams in the three countries, project partners, and the project's expert reference group.

Scoping activity: knowledge, skills and confidence regarding ASD

Initial activity focused on reviewing training models and policy, reviewing the literature regarding teacher education in autism (Lessner Lištiaková and Preece, 2019) and obtaining the perspectives of special educators in Croatia, Poland and the Republic of North Macedonia about their knowledge, skills and confidence regarding ASD via a survey and focus groups.

Methods

The survey tool (a closed questionnaire) and focus group schedule were developed by partners from the Universities of Kraków, Northampton and Zagreb and Autism Macedonia Blue Firefly. Tools were translated into Croatian, Polish and Macedonian and piloted in November 2018. Following minor amendments, both tools were finalised. Questionnaires

were distributed (electronically and hard copy) to specialist educators from both mainstream and special school settings in the three countries between November 2018 – February 2019. At the same time, focus groups were held in Zagreb, Kraków and Skopje gathering qualitative data about the challenges faced by these educators. Ethical approval for the scoping exercise, research tools and accompanying documentation was obtained from the University of Northampton. In total, 560 questionnaires were distributed and 340 returned. Following data cleansing there were 294 usable responses: 103 from Croatia, 118 from Poland and 73 from the Republic of North Macedonia. Sixty teachers participated in focus groups: seven from Croatia, 42 from Poland and 11 from the Republic of North Macedonia. In this paper, we focus on data collected from specialist educators in the Republic of North Macedonia during initial scoping and the evaluation of the programme, materials and training.

Findings

Inaccurate understanding of ASD

Analysis of the quantitative data showed that many teachers held narrow, stereotypical or sometimes factually inaccurate understandings regarding ASD. With regard to the North Macedonian respondents:

- 60% (n = 44) thought children with ASD preferred to be alone
- 59% (n = 43) thought children with ASD could not make eye contact
- 45% (n = 33) thought children could grow out of ASD
- 21% (n = 15) thought ASD could be cured
- 19% n = 14) thought children with ASD were good communicators
- 12% (n = 9) thought children with ASD had no emotions.

Ambivalent attitude towards inclusion

Macedonian teachers held contradictory attitudes regarding the educational inclusion of children with ASD. Ninety per cent (n= 66) acknowledged that children with ASD benefit from playing and interacting with their non-disabled peers; and 70% (n = 51) stated that children with ASD can be educated alongside their non-disabled peers. However, a similar number (69%, n = 50) said that children with ASD needed to be educated in special schools. This suggests an ambivalence towards inclusion that has been noted amongst professionals

more widely, e.g. in literature from the United Kingdom (Male, 2011) and the United States (Ross-Hill, 2009).

Common approaches in ASD: confidence and use

Regardless of where children are educated, almost three-quarters of respondents (73%, n = 53) felt children with ASD required specialist approaches. A number of such educational approaches and interventions are considered as 'good practice in ASD' (Parsons *et al.*, 2009) and are in common use internationally. These include behavioural approaches such as Applied Behavioural Analysis (ABA) (Lovaas, 1987); structured teaching (Mesibov *et al.,* 2005); Social Stories™ (Gray, 1994); augmentative communication approaches (AAC), e.g. Picture Exchange Communication System (PECS) (Frost and Bondy, 2002); as well as interactional and peer-mediated approaches (Greenspan and Lewis, 2005; Laghi e*t al*., 2018). The survey identified that few North Macedonian respondents had received training in such approaches or felt confident in their use. However, despite this lack of training and confidence, such methods were in frequent use in North Macedonian classrooms. Table 1 shows that the approaches identified above were in use in the majority of North Macedonian classrooms. The overwhelming majority of teachers were using these approaches without training or confidence in what they were doing – often after watching English language videos on YouTube or based upon their reading – and the gap between knowledge and practice was stark. Without appropriate training, approaches may be incorrectly applied resulting in ineffective practice and poor outcomes for teachers and children (Scott and Condillac, 2018; Suhrheinrich, 2011).

Table 1. Training, confidence and use of 'good practice' approaches

Approach	Received training		Confident in use		Using approach in practice	
	N	**%**	**N**	**%**	**N**	**%**
Applied Behaviour Analysis	5	7	12	16	56	77
Augmentative communication	3	4	11	15	61	84
Structured teaching	0	0	4	6	53	73
Social Stories™	4	6	7	10	53	73
Interactional approaches	1	1	4	6	43	59
Peer-mediated approaches	0	0	2	3	37	51

Confidence in meeting the needs of children with ASD/need for training

North Macedonian respondents expressed low confidence in supporting children with ASD in many key areas of need (see Table 2), with fewer than a third feeling able to help children effectively access learning. It is unsurprising that 95% of North Macedonian respondents (n = 69) identified a need for further training.

Table 2. Teachers' confidence in supporting children with ASD

Area of need	N	%
Children's sensory needs	28	38
Children's expressive communication	27	37
Managing challenging behaviour	26	36
Dealing with children's anxiety	26	36
Learning and curriculum access	23	32
Children's social understanding	20	27
Accurate understanding of ASD	13	18

The ASD-EAST teacher training programme

A training programme and materials were developed between spring and autumn 2019 addressing six key domains identified within the scoping activity: communication, emotional understanding, social skills, sensory needs, modifications/adaptations and challenging behaviour. These were differentiated for mainstream and special school settings and translated into Croatian, Polish and Macedonian. Participants were recruited within the three countries, and workshops of 12 hours' duration (delivered by practitioner and academic partners) were held between October 2019 and January 2020 in Zagreb, Kraków and Skopje. Separate workshops were held for mainstream and special school staff. ASD-EAST training was provided to 259 teachers: 121 from mainstream and 138 from special schools.

Three workshops were held in Skopje, one for mainstream and two for special school teachers. A total of 112 teachers from across the Republic of North Macedonia attended workshops – 66 from mainstream and 46 from special schools. Participants came from across the country (Bitola, Gostivar, Kavadarci, Kumavova, Negatino, Novo Selo, Ohrid, Prilep, Skopje, Strumica, Sveti Nikole, Tetovo, Valandovo and Veles) and included teachers from all special schools in the country.

Evaluation methods

Pre-training, post-training and follow-up questionnaires and interview schedules were developed, translated and piloted; and ethical approval was again obtained. All participants completed pre-and post-training questionnaires. Follow-up questionnaires were distributed 2-3 months after training. In total, 139 were returned (54% response rate); 30 North Macedonian teachers (27%) responded. In addition, 10 teachers were interviewed three months after the workshops – five from mainstream and five from special schools.

Evaluation findings

Analysis of post-training questionnaires identified that attending ASD-EAST training significantly improved both mainstream and special school teachers' confidence across all topics covered by the programme.

Data from the Republic of North Macedonia showed that:

- training fulfilled expectations of 92% of participants (n = 97)
- 92% felt there was the right amount of theoretical information to support practical strategies (n = 97)
- 91% learned strategies they felt they could put into practice straight away (n = 96)
- 94% would recommend the training to their colleagues (n = 99).

Follow-up questionnaires and interviews provided evidence that teachers were making practical use of strategies and approaches from the workshops. Particular use was made of strategies to support learning and access the curriculum (80%, n = 24), supporting communication (70%, n = 21), managing challenging behaviour (60%, n = 18) and supporting social interaction and peer relationships (53%, n = 16).

Interview participants identified benefits from across the programme; and the fact that training was provided by experienced practitioners, who understood the challenges that teachers experienced, gave the ASD-EAST programme credibility and authority.

> *"I especially liked that the trainers worked out the topics by sharing practical examples and personal experiences in working with children with ASD".*

Teachers had taken the ASD-EAST materials back to their schools and shared what they had learned with their colleagues; and it was noteworthy that not only did teachers feel calmer and more confident, but that positive changes were also identified in the children they taught.

> *"I shared the acquired knowledge with my closest associates, colleagues with whom we work directly in the same department, and the parents themselves notice the positive changes in their children."*

Conclusion

The ASD-EAST project has identified key barriers to the inclusion in education of children with ASD across both mainstream and special school settings regarding teacher knowledge, confidence and skills. It has also demonstrated that even just 12 hours of targeted and appropriate training, built upon evidence-based practice and delivered by credible practitioners, can impact in these areas and lead to positive outcomes for learners with ASD. The Republic of North Macedonia's recent adoption of its new Law on Primary Education (Government of the Republic of North Macedonia, 2019) has firmly established the principle of full inclusion of all pupils. Research elsewhere in Europe has shown that putting such policy into practice requires not only systemic change (Smyth *et al.*, 2014) but also the understanding and acceptance of professionals (Alekhina, 2016). We argue that effective, ongoing teacher education must be provided to ensure that aspirations regarding inclusion are realistic and achievable, and to ensure teachers have the knowledge, skills and confidence to meet the needs of all children, turning rhetoric into reality.

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