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Regular Article

"Words, words, words": A cross-country qualitative analysis of professionals' views on ASD and ASD care systems

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ABSTRACT

Professionals' perceptions of ASD and its care system, its associated behaviours, and experience of reactions to ASD, in Bangladesh, Indonesia, and UK were explored. Thirty-seven semi-structured interviews explored professionals' experiences. Similarity, rather than difference, characterised these responses, and resources, rather than cultural beliefs, were a key issue. Any differences were related to the conception of ASD, with professionals in low-to-medium-income countries placing greater emphasis on parental and societal factors than those in the UK, which may be linked to cultural beliefs. However, such differences did not appear to impact what professionals explored during the diagnoses, nor the types of interventions that were suggested. There were recurring themes of stigma and social inclusion, and the need for support, across all countries, which may be important in understanding ASD cross-culturally around the world.

Autism Spectrum Disorder (ASD) is a multifaceted and enduring neurological condition manifesting during the early stages of development. It is distinguished by challenges to social interaction and communication, as well as restricted or highly-focused activities and behaviours (APA, 2022; WHO, 2023). Additionally, persons with ASD can exhibit many comorbidities (Casanova et al., 2020), such as intellectual difficulties (Miot et al., 2019), hyperactivity, and anxiety (Kirsch et al., 2020), as well as having frequently unaddressed medical requirements (Lunsky et al., 2015; McPheeters et al., 2011). Due to these challenges, substantial demand exists for services to address specific behavioural and developmental concerns (Copeland & Buch, 2013), as well as manage concurrent problems (Zablotsky et al., 2015). Provision of this assistance is often constrained in terms of accessibility, adequacy, and overall satisfaction for individuals with ASD and any caretakers (Crane et al., 2021; Galpin et al., 2018; Hebron & Bond, 2017; Preece, 2014), and professionals often express a desire to provide more comprehensive and extensive assistance (Rogers et al., 2016; Unigwe et al., 2017). This is especially true when tailoring educational services for children with ASD (Tissot, 2011), which can present challenges that are intensified by increased demand for such services (Reed, 2016), and limited comprehension regarding ASD (Donnellan & HillLeary, 2013; Galpin et al., 2018; Preece, 2014; Roberts & Simpson, 2016). Given this, view of professionals delivering services form the focus of the current study.

More affluent nations have had extensive access to ASD information for a considerable period (Chiarotti & Venerosi, 2020; Salari et al., 2022), but research on mental and behavioural health concerns has had comparatively limited emphasis within low-to-medium-income countries (Hossain et al., 2017; Makino et al., 2021; Preity et al., 2017). Limited awareness and service provision for ASD in low-and middle-income countries has been attributed to such a dearth of understanding, as well as financial constraints (Hossain et al., 2017; Viljoen et al., 2021). Moreover, identification of ASD may be limited due to societal stigma surrounding mental and behavioural health issues, specifically in the context of children (Mustary & Reed, 2024; Rahman et al., 2019). Such factors make a necessity of gathering data on ASD in low-to-middle-income nations, while acknowledging the significant variations in their cultures, education systems, and economies (Daulay, 2018; Mustary & Reed, 2024; World Bank, 2021). Given this, the current study examined professionals' views regarding ASD in Bangladesh and Indonesia, in comparison to the UK. These countries were selected based on the presence of favourable conditions to collect data, as well as them representing countries with different developed provisions for ASD. Bangladesh and Indonesia are low-to-medium-income countries at different stages of implementing laws and national services related to ASD, whereas the UK is a higher-income country with well-established services.

Bangladesh has policy for ASD through two legislative acts

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(Mahabuba et al., 2023): Disability Rights Law (2013), and Neuro-developmental Disability Protection Trust Act (2013). These pieces of legislation address provision of support for neurodiverse individuals to promote rehabilitation and social empowerment, and underscore education systems relevant to the population. Programmes to address community-based needs associated with ASD are facilitated through the Advisory Committee on Autism and Neuro-developmental Disorders; a multi-ministry committee involving representatives from all stakeholders, supported by an Autism Technical Guidance Committee. A National Disability Complex was established in 2014 to support students with additional needs, including ASD. Additionally, since 2009, Protibondhi Sheba O Sahajya Kendro provides services including physiotherapy, occupational therapy, counselling, and assistive devices (supported by the 'One Stop Mobile Service' for individuals in rural areas with limited access to medical services). However, Bangladesh has no comprehensive social care and monitoring system, and the extent of programme impact remains uncertain (Mahabuba et al., 2023).

In juxtaposition, Indonesia and the UK exemplify nations exhibiting varying degrees of development in their national approach to neurodiversity: Indonesia is a low-to-medium-income country with a relatively less-developed response; whereas the UK is a higher-income country, with a more-developed response. In Indonesia, a recent educational programme has been implemented to facilitate mainstream inclusion of children with special needs, as well as training and information about optimal teaching methodologies. For example, some educational institutions offer designated break rooms to cater for diverse learning needs, alongside the provision of psychologists and teaching assistants. Families have autonomously established regional organisations and educational institutions for mutual assistance, although this development is in its early stages, and is not a central-government initiative, which has not established a cohesive and complete approach (Pratama, 2020).

On the opposite end of the continuum, UK provisions for neurodiverse children have existed since the early 20th century (Reed and Osborne, 2023). Services tailored specifically for ASD were established during the 1960s through parents. Recognition of the necessity for health, social care, and education sectors to adopt proactive approaches was officially acknowledged in 1998 through the Department for Education and Employment, Autism Working Group (Osborne & Reed, 2023). The National Health Service (NHS) plays a vital role in the management and support of individuals with ASD and their families/caregivers, and encompasses primary, secondary, and tertiary services, both directly and in collaboration with education, social care, and voluntary sectors (NICE, 2021). The Autism Education Trust (2007) for England and Wales identifies exemplary practices, and focuses on development of formal competencies and training programs for educational practitioners. The Autism Act (2009) imposes an obligation on the Secretary of State for Health to formulate a comprehensive plan for individuals with ASD, irrespective of their cognitive capabilities (the individuals with ASD). This should entail establishment of well-defined diagnostic processes, designation of lead professionals responsible for diagnosis and assessment, development of explicit transition plans, appointment of a senior commissioner responsible for joint efforts, and the formulation of localised commissioning plans.

Thus, these three countries offer chance for analysis of ASD services and provisions that would contribute knowledge of the global landscape of ASD, whilst acknowledging differences across low-to-medium-income countries. However, despite differences in legislation, actual provision of services may vary less than expected. It is widely stated that there is a lack of knowledge about ASD in low-to-medium-income countries (Hossain et al., 2017; Makino et al., 2021; Preity et al., 2017), although it may be that this is not so much a lack of knowledge, but a different understanding of ASD attributable to cultural differences and beliefs (Mustary & Reed, 2024). However, there are very few studies that have compared across countries directly using the same methodology, making any such claims difficult to substantiate, and it may be that knowledge varies within countries to the same extent as between countries. To commence such a comparative analysis, the perspectives of professionals offering ASD services were deemed important to ascertain, and inquiries were conducted into three domains involving their perspectives on: the nature of ASD; the key ASD-related behaviours and corresponding interventions; and assistance provided to family by services.

It is well established in the UK that professionals' knowledge about ASD is variable, and such knowledge a significant factor determining professionals' capacity and willingness to offer provision (Baglieri and Shapiro, 2017; Busby et al., 2012; Crane et al., 2021; Jones et al., 2014; Segall & Campbell, 2012; Unigwe et al., 2017). Similarly, Biswas et al., 2021 examined understanding of ASD among special educators in Bangladesh, and noted that teachers exhibited a lack of awareness regarding ASD, and misconceptions about its underlying causes (which are shared by parents, see Kaneez & Reed, 2024). There is limited research available on perceptions of Indonesian teachers, with only one study partially exploring opinions of Indonesian teachers. Febrian and Widavant (2015) demonstrated nearly 90 % of teachers demonstrated unfamiliarity with ASD, and those claiming knowledge and expertise held ASD to be synonymous with mental instability.

In respect to ASD related behaviours and their treatment, there is a great deal of evidence relating to outcome-effectiveness studies derived from higher-income countries (Reed, 2016), but less from low-to-medium-income nations (see Gómez-Marí et al., 2022). However, this does not guarantee that a scientific-base is translated into professionals' understanding in any country. In the UK, and other economically-prosperous countries, professionals providing services for ASD often report a sense of inadequacy when addressing challenging behaviours and distress (Syriopoulou-Delli et al., 2012). Gómez-Marí et al. (2022; see also Reed, 2016) noted that the learning strategies and cognitive characteristics exhibited by individuals with ASD pose a challenge to established pedagogical principles and practices. Previous research has proposed that the way teachers perceive the causes of problematic behaviours influence their decisions to provide assistance (Lambrechts et al., 2018). The situation is quite similar in low-to-medium income countries. Tabib (2016) noted that medical professionals in Bangladesh exhibited a lack of knowledge on the clinical characteristics and treatment strategies for ASD. Efa (2015) found a majority of teachers lacked comprehension of challenging behaviours associated with ASD; while they could identify short-term tactics for reactive management, they did not describe any named or intricate tactics that could be employed to handle problematic behaviours. In Indonesia, Tucker, 2013 concluded most teachers have not received specific training in how to educate students with ASD and challenging behaviours; and Handayani and Paramita (2020) indicated Indonesian teachers mainly attribute challenging behaviour to family-related factors (which may, or may not, be the case; Osborne and Reed, 2009). Ashar and Kholidya (2019) studied an inclusive setting, and reported teachers were able to understand the triggers of challenging behaviours, but were only able to apply minor interventions when challenging behaviours were at an early stage.

Although there exists a widespread recognition of ASD in the UK by families (Msutary & Reed, 2024), Crane et al., 2021 noted a widespread absence of post-diagnostic assistance for both individuals with ASD and their families (see also Jones et al., 2014; Rogers et al., 2016). Parker et al. (2015) revealed significant disparities in rates of school exclusions between those with ASD, indicate that pupils with ASD are twice as likely to experience such exclusions compared to their non-SEN peers. Thus, knowledge and awareness do not necessarily translate in differential familial support. In Bangladesh, Rahman et al. (2019) revealed over 75 % of children with ASD in Bangladesh experience neglect from their family, characterised as a lack of proper care, avoidance, and failures to provide necessary physical and mental support. Additionally, a high proportion of such children experience exclusion and discrimination along various dimensions, including access to mainstream

education, specialised academic and vocational education, social recognition and respect, adequate healthcare services, and the ability to retain meaningful social connections. Social discrimination is associated with familial neglect, peer group dynamics, inadequate access to education and healthcare, and failure to engage with typically developing children. Parenting practices in Indonesia are significantly shaped by cultural values (Riany et al., 2016), where diagnosis of ASD can be regarded as a negative occurrence linked to past transgressions (Daulay, 2018; Widayanti & Fletcher, 2023). Similarly, Vani et al. (2023) observed that Indonesian parents of children with disabilities frequently exhibited neglectful behaviour attributed to societal stigma and insufficient support from communities.

Given all of the above, the present study encompassed the first cross-country exploration of professionals' views of a range of key areas related to ASD provision. It employed semi-structured interviews that explored professionals' perceptions of ASD, selection of interventions, and views on support within the context of their cultural traditions and the resources accessible to them. The adoption of a qualitative approach was motivated by: firstly, a lack of clarity on issues that would emerge; secondly, a lack of established quantitative tools capable of effectively capturing these issues; and thirdly, as it was crucial to provide participants with ample freedom to express cultural differences that may not have been initially considered by the researchers.

1. Method

1.1. Participants and Recruitment

Participants were recruited via advertising on internet fora, social media groups, social media pages, and organisations working with people with ASD, in each of the countries examined. In each country, local social media and internets were explored for groups, including GPs, Consultants, Social Workers, Psychologists, Occupational Therapists, and Teachers working with people with ASD. The moderators of these groups were contacted to see if the study could be advertised on their site. If this was agreed, then an advertisement was posted, to which people could reply if they wanted to participate. Thirty-seven professionals agreed to participate and were interviewed across Bangladesh ($n = 12$), Indonesia ($n = 18$), and the United Kingdom ($n = 7$). Typically, saturation for qualitative studies (the point at which new themes are not encountered) is reached after between 12 and 18 participants, so this number exceeded that typically noted as adequate (Hennink & Kaiser, 2022).

Table 1 gives details of the participants, including genders and occupations. Most were teachers in special education, but other professionals included Speech and Language Therapists (SLTs), Occupational Therapists (OTs), Psychologists, Behaviour Analysts (BCBA), and Intensive Interaction practitioners. Reflecting the development of national policies and practices in the countries, the Bangladeshi professionals worked in both public and private sectors, those in Indonesia worked in the private sectors, and those in the UK worked in the NHS and public sectors.

This study obtained ethical approval from the Ethics Committee of the School of Psychology at Swansea University, UK. Prior to conducting the interview, all participants were provided with a comprehensive explanation of the goal and nature of the interview, and they gave their consent. All participants were informed of their right to withdraw from the study at any point.

Table 1
Participant characteristics.

Countries	N	Gender	Age	Occupation	Sector	Years Experience
		M F		Special Ed Other	Public Private	
Bangladesh	12	6 6		9 3	5 7	10+
Indonesia	18	3 15		16 2	0 18	10+
UK	7	1 6		4 3	2 5	10+

1.2. Participating countries

Bangladesh is in South Asia, covering 147,570 km^2, with a population of 163 million. Dhaka is the capital, most populous city, and hub for economic, political, and cultural activities. It has the second largest economy in South Asia, following India (Ahmed, 2022). According to the census data (2022), Islam is the predominant religion, with approximately 91 % of the population adhering to its teachings. The educational framework is characterised by three distinct sectors (Overall Education System in Bangladesh, 2021): primary (6–11); secondary (11–18); and tertiary (post-18). The Constitution mandates all children are entitled to free and compulsory education, and the Human Rights Measurement Initiative (2022) notes that educational fulfilment is 82 % of what is expected based on income level.

Indonesia is in Southeast Asia and Oceania, comprising 17,000 islands (including Sumatra, Sulawesi, Java, portions of Borneo, and New Guinea), and covers 1,904,569 km^2, with Jakarta as the capital. Its population is over 270 million, ranking as the fourth most populous nation globally, and has a Muslim-majority. The nation possesses the 16th largest economy globally. Administration of education is by two governmental bodies: the Ministry of Education, Culture, Research, and Technology (Kemdikbudristek); and the Ministry of Religious Affairs (Kemenag). The former oversees general education, and the latter manages specialised Islamic, Christian, and Buddhist educational institutions. It is a requirement for all individuals to complete a twelve-year educational program (6 years at elementary level, and 3 years at middle and high school levels). Currently, Indonesia lacks the presence of social care services or any comparable institutional framework.

United Kingdom is located on the northwestern coast of the European landmass, and covers 242,500 km^2, with a population of 68 million. London is the capital, and a global hub for financial activities. The UK has the fifth-largest economy globally. The UK comprises four constituent countries: England, Scotland, Wales, and Northern Ireland, with devolved administrations for health and education. Education is mandated between 5 and 16 years, and the proportion of individuals possessing a university or college degree is 38 %, representing the highest percentage among European nations. Free universal healthcare is extended to all permanent residents, and a social care structure is in place in all four constituent countries.

1.3. Procedure

The same researcher conducted each interview through individualised interactions, utilising various communication mediums, such as telephone, messenger, or audio conversations. Given that the same researcher conducted the interviews, this may introduce some bias, so an interview script was prepared to ensure that the same questions would be asked in the same order to all participants. Prior to the interview, participants were given an introduction to the study to establish a sense of comfort inside the research environment. This additionally ensured that all participants were prepared in a comparable manner. The duration of interviews ranged from 30 to 40 min, but participants were not discouraged or inhibited from discussing matters in as much detail as they deemed suitable for each question.

The interviews were conducted in a systematic manner, following a predetermined set of instructions and questions. The script delineated the specific inquiries and prompts to be employed for the purpose of eliciting responses. The implementation of this protocol meant that similar inquiries were posed in each interview in a consistent and standardised manner, to maintain uniformity and consistency. There were 10 questions, divided into three sections: perceptions of ASD; perceptions of behaviours and treatment; and perceptions of family, care, and support issues. These areas were selected after consultations

with professionals from the participating countries. Questions were asked in English in the UK, but an interpreter was used for Bangladeshi and Indonesian professionals. The questions were initially translated into the local language, and then back translated by an independent translator to ensure preservation of meaning. Once the translation was agreed, this was asked by the translator. Table 2 displays the summary of the questions that were asked during the interviews.

1.4. Content analysis

The interviews were captured using a conventional tape recorder, and stored on audiotapes, which were then transcribed. Subsequently, the transcripts of the interviews underwent content analysis to derive overarching themes that would encapsulate the remarks made during the interviews. The aforementioned methodology has been previously employed to get a deeper understanding of the outcomes derived from interviews, as well as to facilitate the conversion of qualitative themes into quantitative data. In order to achieve these objectives, the content analysis was carried out in accordance with the guidelines proposed by Vaughn et al. (1996), Frederickson et al. (2004), and Osborne and Reed (2008). The processes involved in doing content analysis are delineated in Table 3.

Following transcription, statements made by participants were deconstructed into the most basic units of information that could be interpreted independently as meaningful and instructive utterances. Many statements comprised lengthy phrases, encompassing multiple points, and these were separated into distinct units. A representative subset of the interview transcripts was chosen, with one transcript taken from each country. These interview transcripts were thoroughly examined multiple times, and category headings were created for the statements provided in response to each question. The selection of these category headings was made with the intention of facilitating classification of all units of information pertaining to a specific question, based on the headings generated for that question. Once the categories were determined, the researcher proceeded to categorise all the units of information generated during each interview. Saturation was reached after approximately 22 interviews, after which no further new themes emerged. Inter-rater agreement about coding was examined by a second researcher taking 20 % of the scripts, and coding the units into the given categories blind to the first researcher's coding. Inter-rater agreement was established as .79 by Cohen's Kappa.

1.5. Community Involvement statement

In developing the questions for this interview, people with ASD, as well as professionals offering support (i.e. community providers), were involved in establishing the range of topics to be covered.

2. Results

2.1. ASD

2.1.1. What ASD means and what causes ASD?

Table 4 summarises professionals' responses about their understanding of ASD. Professionals from all countries noted that ASD was a neuro-developmental delay, with this response being more prevalent from Bangladesh and Indonesia. Thinking of ASD as a different ability was mentioned more by UK professionals (no such explanation was recorded by Indonesian participants).

Table 5 summarises responses regarding professionals' beliefs about causes of ASD. The majority of comments from UK professionals (>80 %) suggested either a genetic or brain abnormality as the cause of ASD. These suggestions were also made, to a lesser extent, by Indonesian (~50 %) and Bangladeshi (~30 %) professionals. Bangladeshi (~60 %) and Indonesian (>30 %) professionals were also likely to mention environmental pollutants, and mother's behaviours during pregnancy, as potential causes; certainly more often than UK professionals (~20 %). Thus, professionals in the UK regarded ASD as a different form of ability linked to neuro-developmental issues, whereas those in Indonesia and Bangladesh seemed to view this as a neuro-developmental disorder as likely to be linked to environmental insult as with genetic influences.

2.1.2. Key signs of ASD during diagnosis

Table 6 summarises responses regarding deficits noticed before a diagnosis of ASD was confirmed. Deficits in speech and socialisation were identified as key symptoms by professionals across all three countries. Deficits in socialisation and play skills were noticed more by professional in Bangladesh and the UK. However, Indonesian professionals tended to report deficits in behaviour more compared to other two countries.

2.1.3. What is your view of the diagnostic and care system?

Table 7 summarises responses made about the diagnosis and care processes for ASD within the practice of their own country. Professionals from all countries viewed their system as problematic, especially around issues as resourcing, coherence, and consistency. Such views accounted for the majority of comments. In addition, around 25 % of all comments from each country suggested professionals found the system stressful for them. All countries' professionals reported some negative experience during the process with parents, although to a lesser extent than the former two categories. Professionals in Bangladesh and Indonesia, but not in the UK, also reported negative experiences with other professionals.

Table 2
Summary of the questions asked during the interviews.

ASD and the care system
➢Tell me what 'ASD' means to you.
➢What causes ASD?
➢What behaviours are key in diagnosis?
➢What is your view of the diagnostic system?
Behaviours in ASD
➢Behaviours you are concerned about.
➢Why people with ASD behave the way they do.
➢How do challenging behaviours develop?
➢What interventions actually work or should be tried.
Family and care issues
➢Comments/concerns from family members, and/or members of the public, made regarding the behaviours of an individual with ASD, that are concerning.
➢Future expectations for people with ASD.
➢Who should take primary responsibility for the wellbeing of this person long term?

Table 3
Outline of content analysis.

1. Identification and highlighting of units of information (words, phrases and/or sentences) relevant for research purposes.
2. Selection of category headings to sort and group these units of information.
3. Coding of units of information according to category headings, to enable most of the units to be placed within a category.
4. 4. Negotiation between the researchers to agree the category headings that most economically accommodate the relevant units of information.
5. Categories generated in the first phase of data analysis are reviewed and revised.

Note: Based on Vaughn et al. (1996); Osborne and Reed (2008).

Table 4
Percentage comments (number participants) in different categories for what ASD means (Question 1).

Country	Lifelong Disability	Neuro-developmental delay	Different ability
Bangladesh	0	75 % (3)	25 % (1)
Indonesia	9 % (1)	91 % (10)	0
UK	0	33 % (4)	67 % (6)

2.2. Behaviours and ASD

2.2.1. Behaviours you are concerned about, and why people with ASD behave the way they do

Table 8 describes a range of behaviours professionals find challenging in connection with ASD. A higher number of UK, and to a lesser degree Indonesian, professionals' comments expressed worries about self-injurious behaviours, compared with Bangladeshi participants. Aggressive and ritualistic behaviours were noted more often by Indonesian and Bangladeshi professionals, although these were also mentioned by UK professionals. A small percentage of Bangladeshi and UK comments expressed concern regarding individual's sexualized behaviours, whereas Indonesian professionals noted ritualistic behaviours as a concern.

Table 9 summarises responses regarding why people with ASD behave the way that they do. Communication difficulties were identified by professionals from all countries as a cause of challenging behaviours, along with the nature of ASD (i.e. the behaviours forming the condition). A small number of Indonesian and Bangladeshi professionals' comments indicated lack of engagement, and lack of understanding, as a causes of challenging behaviour. Similarly Bangladeshi and Indonesian comments sometimes suggested lack of family support as a cause of challenging behaviour, compared to none from UK participants.

2.2.2. How did the person with ASD develop challenging behaviours?

Table 10 shows professionals' comments about the reasons for developing challenging behaviour. A high number of comments suggest that problematic behaviours are learned, with this number being highest for Indonesian professionals. Professionals from UK and Bangladesh identified a lack of functional skills as responsible for challenging behaviour. A higher number of UK professionals believe a lack of person-cantered plans and inconsistent behaviour management, are the cause of challenging behaviours. Few comments suggested the challenging behaviours are integral to ASD.

2.2.3. What interventions work or should be tried

Table 11 illustrates what professionals believe to be the ideal intervention for ASD, and the comments reflect some degree of uniformity. Professionals in all countries suggested ABA and sensory integration techniques as important treatments, with ABA being more highly commented about in Indonesia and Bangladesh, and sensory integration being more commented upon in the UK, as were eclectic approaches. It may be that the focus on a behavioural intervention mirrors a greater concern with aggressive behaviours in Bangladesh and Indonesia.

2.2.4. Family and care issues

Table 12 summarises comments about ASD heard by professionals that were concerning. Similar number of professionals experienced negative comments about the individual they were supporting from the community as a whole. Some Bangladeshi and UK professionals' comments suggested family members made negative comments.

Table 13 describes the future expectations of professionals regarding the individuals with ASD with whom they are working. A similar number of professionals in all countries expected the individual to

Table 6
Percentage comments (number participants) in different categories for signs first noticed among children with ASD (Question 3).

Country	Deficits noticed in Speech	Deficits noticed in Socialisation	Deficits noticed in play skills	Deficits noticed in Behaviour
Bangladesh	24 % (4)	35 % (6)	6 % (1)	35 % (6)
Indonesia	23 % (7)	19 % (6)	6 % (2)	52 % (16)
UK	27 % (3)	27 % (3)	18 % (2)	27 % (3)

Table 7
Percentage comments (number participants) in the different categories for views of the diagnostic and care systems (Question 4).

Country	Negative experience with system	Negative experience with professionals	Negative experience with parents	Stressful time
Bangladesh	50 % (4)	25 % (2)	25 % (2)	25 % (2)
Indonesia	45 % (3)	20 % (2)	15 % (3)	20 % (2)
UK	55 % (6)	0 % (0)	10 % (1)	25 % (3)

Table 8
Percentage comments (number participants) in categories for ASD-related behaviours that are concerning (Question 5).

Country	Self-injury	Lack of Skills	Aggression	Sexualized Behaviour	Ritualistic Behaviour
Bangladesh	18 % (2)	27 % (3)	27 % (3)	18 % (2)	9 % (1)
Indonesia	36 % (8)	0	41 % (9)	0	23 % (5)
UK	57 % (4)	0	29 % (2)	14 % (1)	0

Table 5
Percentage comments (number participants) into different categories for what causes ASD (Question 2).

Country	Medication, nutrition, & depression during pregnancy	MMR vaccine	Mercury & chemicals	Brain abnormality	Genetics	Pollution/environment
Bangladesh	29 % (4)	0	14 % (2)	14 % (2)	14 % (2)	29 % (4)
Indonesia	20 % (6)	3 % (1)	17 % (5)	6 % (2)	42 % (13)	13 % (4)
UK	9 % (1)	0	0	27 % (3)	55 % (6)	9 % (1)

Table 9
Percentage comments (number participants) in different categories for why people with ASD behave the way they do (Question 6).

Country	Lack of Engagement	Lack of family Support	Communication Difficulties	Because of ASD	Lack of understanding of social expectation
Bangladesh	8 % (1)	8 % (1)	46 % (6)	23 % (3)	15 % (2)
Indonesia	14 % (3)	5 % (1)	57 % (12)	24 % (5)	0
UK	0	0	50 % (5)	40 % (4)	10 % (1)

Table 10
Percentage comments (number participants) in different categories for how the person with ASD developed challenging behaviours (Question 7).

Country	Learned behaviour	Lack of functional skill	Develop due to ASD	Lack of person-centred plan and inconsistent treatment
Bangladesh	37 % (4)	27 % (3)	18 % (2)	18 % (2)
Indonesia	69 % (11)	13 % (2)	6 % (1)	12 % (2)
UK	40 % (4)	30 % (3)	0	30 % (3)

Table 11
Percentage comments (number participants) in different categories for what interventions actually work, or should be tried (Question 8).

Country	Early Intensive Intervention/ Applied Behaviour Analysis	Bio-medical Interventions	Sensory Integration/ Speech therapy	Eclectic Approach
Bangladesh	53 % (9)	6 % (1)	29 % (5)	12 % (2)A
Indonesia	70 % (12)	12 % (2)	18 % (3)	0
UK	40 % (2)	0	40 % (2)	20 % (1)

Table 12
Percentage comments (number participants) in different categories for comments from family members and/or others about ASD that are concerning (Question 9).

Country	Family members	Friends	Community	School/College
Bangladesh	23 % (4)	12 % (2)	65 % (11)	0
Indonesia	6 % (1)	0	82 % (14)	12 % (2)
UK	38 % (3)	0	50 % (4)	12 % (1)

Table 13
Percentage comments (number participants) in different categories for future expectations for persons with ASD (Question 10).

Country	Independent living	Communication/ skill development	Supported Living	Social Inclusion
Bangladesh	6 % (1)	69 % (11)	25 % (4)	0
Indonesia	5 % (1)	40 % (8)	5 % (1)	50 % (10)
UK	14 % (1)	43 % (3)	14 % (1)	29 % (2)

develop communication skills. A higher number of Bangladeshi professionals expected that individuals will function with supported living, and those in Indonesia and the UK suggested inclusion in society as a future goal.

Table 14 summarises professionals' expectations about who should take primary responsibility for people with ASD in the longer term. Family members were chosen by the majority of the Indonesian professionals, compared with smaller number of Bangladeshi and UK participants. A higher number of Bangladeshi professionals and carers expect the government to take the responsibility. UK participants expect the social services to take the full responsibility.

3. Discussion

This study examined the experiences of professionals in two low-to-medium-income countries to address the limited available data on service provision for ASD in those nations (Hossain et al., 2017; Makino et al., 2021; Preity et al., 2017). Interviews explored professionals' views about the nature of ASD and it services, ASD-related behaviours and interventions, and future expectations for the ASD individuals (Daulay, 2018). There were few differences observed between the countries in terms of professionals' views of ASD, the key behaviours, nor their perceptions of the care system. There were some recurring themes across countries concerning the needs for better support and resources contrasting with expressed legislation. This lack of resources was especially felt in terms of numbers of trained professionals.

Where differences occurred in the conception of ASD, these suggested that professionals in the low-to-medium-income countries placed a greater emphasis on parental and societal factors in the development of ASD than professionals in the UK. This has been noted in previous studies of professionals (Daulay, 2018), and careers (Mustary & Reed, 2024; Rahman et al., 2019). These views may be linked to cultural beliefs in these countries (Daulay, 2018; Mustary & Reed, 2023, p. 142). These may also relate to the preferred interventions in the different countries, with more behaviourally focused interventions being preferred in countries that emphasised differences in challenging behaviours (i.e. Bangladesh and Indonesia). However, such differences did not appear to impact what professionals explored during diagnoses, nor, to any striking extent, did it impact the types of interventions suggested (Ehsan et al., 2018; Preity et al., 2017). Thus, similarity, rather than difference, characterised these responses, and it may be that resources, rather than cultural beliefs, are a key determinant of service provision – within as well as between countries.

Professionals from each country expressed common concerns regarding the insufficiency of specialised support for effectively managing populations with ASD. Professionals in all countries express concerns about their ability to deliver services, evaluation tools, and resources, and concurs with findings from previous studies. In all cases, the number of professionals able to deliver the services, and the level of training provided, was noted as inadequate. For example, Rogers et al. (2016; Unigwe et al., 2017) surveyed professionals in the UK, and noted obstacles to the delivery of prompt and suitable support for ASD;

Table 14
Percentage comments (number participants) in different categories for who should take primary responsibility for the wellbeing of people with ASD long-term (Question 11).

Country	Family member	Autism Community/Trust	Government/Social Services	Unsure	Key worker/Advocate/Registered Person
Bangladesh	27 % (4)	13 % (2)	53 % (8)	7 % (1)	0
Indonesia	80 % (16)	10 % (2)	10 % (2)	0	0
UK	11 % (1)	11 % (1)	22 % (2)	11 % (1)	44 % (4)

including delays in assessments, insufficiency of diagnostic tools, and limited availability of assistance and support for individuals with ASD and their families following diagnosis (see also Osborne & Reed, 2008; Rogers et al., 2016). Similarly, Crane et al., 2021 identified perceived impediments, including a deficiency in ASD knowledge among professionals. Ehsan et al. (2018) examined the difficulties encountered by care professionals in Bangladesh and noted similar factors contributing to challenges faced in the sector. These factors encompassed limited dissemination of technology expertise, the absence of long-term monitoring and database systems, and the linguistic barriers arising from geographic and demographic disparities affecting accuracy of translations in the diagnosis process. Likewise, Yuwono et al. (2021) investigated comprehension of ASD among teachers in Indonesia, who reported concerns over their capacity to detect ASD, and understand the attributes associated with ASD. Sidjaja et al. (2017) noted Indonesian professionals lacked confidence in the diagnostic process, and perceived children to be misdiagnosed due to the absence of a standardised system.

Despite the presence of well-defined guidelines for the provision of services to individuals with ASD, there exists considerable variation in the execution of these services, contingent upon the availability of resources and money. The interviewed processionals expressed a desire for a standardised approach. Of course, given the variations in resources, and (to some degree) cultural views about ASD, such implementation may be problematic. Bethune and Wood (2013) suggested the conventional approach to offering professional development typically relies on lectures and handouts. However, this strategy is often deemed unsuccessful due to its failure to provide practical strategies for implementing the information. There is a recognised necessity for the establishment of additional professional development that supports professionals engaging in practical application of interventions learned during sessions through feedback that has the potential to enhance the implementation of novel instructional strategies (Odom et al., 2010).

Professional also noted some issues with stigma and negative comments from the community. This may not be culture specific, as it was noted in all countries. Individuals with ASD have many difficulties within inclusive educational environments, encompassing challenges related to social interactions, academic performance, and behavioural patterns (Allen & Yau, 2019, pp. 267–279). Additionally, difficulties with play and learning have been observed in this population (Mody & Belliveau, 2013), and certain behaviours associated with ASD may hinder active participation in classroom activities and engagement with peers (Conallen & Reed, 2017). For example, verbal outbursts and challenging behaviours can lead to disturbances within inclusive educational settings (Mody & Belliveau, 2013). The heterogeneity among students with ASD pose extra obstacles for educators in inclusive educational settings (Finlay et al., 2022; Leonard & Smyth, 2022).

This study was limited by several factors. For example, only a relatively small number of professionals were interviewed, and the representativeness of this sample, must be considered. Although the number of professional interviewed was adequate to reach saturation, it is still a relatively small number (especially within each country). Moreover, the number of interviews wea primarily determined by opportunity to interview participants, rather than on a preset saturation criteria, which may have impacted the findings. The professionals interviewed were mostly special educators, and other professionals were not available due to work commitments. It may also have been useful to know in more depth about the educational backgrounds of the participants (e.g., is speech therapy in Indonesia perceived and trained in the same way as in the UK?). This may have impacted the participants understanding of ASD. The duration of the interviews was also limited, only 30–45 min, due to the professionals' availabilities. Finally, coding and category selection was performed by two psychologists, and themes may have been perceived differently by professionals from other disciplines.

Despite those limitations, the current study explored perceptions and practices across three different countries with completely different framework or structures. Future research should investigate what specific framework and training for professionals working with students with ASD would be most useful and effective in supporting them in creating an inclusive environment for students with ASD. For example, the current data do indicate some differences in the perception of the nature of neurodiversity (Table 4), the potential causes for ASD (Table 5), and its main symptoms (Table 6). These differences between the countries may be a product of social, cultural, or economic differences between the countries, or of training provided for professionals in those countries. These issues are, of course, very important, and the potential impacts of these considerations should be considered. However, as noted above, the differences between countries are outweighed by the similarities across countries. Moreover, it is important not to be over speculative, at this point, as such speculation can easily be misconstrued in the context of cross-country comparisons. As a consequence, it would be very interesting to see a future more-comprehensive analysis of elements, such as societal attitudes toward disability, religious beliefs, and traditional healing practices, and their impacts on professionals' perceptions and practices.

In summary, there were few differences of note observed between the countries in terms of professionals' views of ASD and its services. Where there were differences, these suggested that low-to-medium-income countries placed a greater emphasis on parental and societal factors in the development of ASD. These views may be linked to cultural beliefs in these countries, but appeared not to impact what professionals explored during their practice. Rather resources, not culture, may be the key determinant of ASD service provision.

CRediT authorship contribution statement

Kaneez Mustary: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Phil Reed:** Writing – review & editing, Supervision, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Ethical statement

This study obtained ethical approval from the Ethics Committee of the School of Psychology at Swansea University. Prior to conducting the interview, all participants were provided with a comprehensive explanation of the goal and nature of the interview, and gave their consent. All participants were informed of their right to withdraw from the study at any given moment. The authors declare no competing interests.

Data availability statement

The data is available on request from the authors.

Declaration of the use of AI

AI tools were not used in this research or preparation of the manuscript.

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