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ORIGINAL ARTICLE

The needs of autistic male students in secondary education in the Netherlands and Mexico: A Q-methodology study

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Abstract

Secondary education can be a challenging environment for autistic students. Previous investigations show that autistic learners go through negative and distressful school experiences, possibly due to a lack of identification and understanding of their unique needs. Yet, research on the needs of autistic students, and particularly from their own perspective, is limited. Therefore, the purpose of this study was to distinguish different need-profiles for autistic males in the Netherlands and Mexico (n=44), two countries with an inclusive educational approach. Using Q-methodology, a combined quantitative and qualitative technique, we were able to identify three groups of autistic males with distinct need-profiles in each country. In this paper, we explore the similarities and differences between the most and least pressing needs of these groups of learners. Notably, autistic students across factors and countries had a strong need for teachers' understanding of their autism and the implications it has for the way they learn. Our findings indicate that there are several ways teachers can best support autistic male adolescents in mainstream secondary education.

KEYWORDS
adolescents, autism spectrum disorders, autistic students, inclusive education, mainstream education, special educational needs

Key points

- We identified three groups with different needs-profiles among autistic students in each country. Dutch participants seemed to prefer emotion regulation strategies, an autism-friendly environment and teachers' involvement and support. Mexican participants needed to feel safe and understood, receive structure and have self-control and be supported with their learning orientation.
- Although the needs of autistic male students were quite heterogeneous, there were many similarities between the Dutch and Mexican participants. Aspects on which participants from both countries seemed to agree were the need for more support in the area of emotion regulation, structure provision and teachers' involvement.
- Across several factors, Dutch and Mexican autistic male students were less focused on needs related to the environment, such as having fixed seats in the classroom. In contrast, needs related to their teacher's support, like receiving clear instructions or support during difficult activities, were often prioritised.

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- One of the main differences between the needs-profiles of autistic male students in the Netherlands and Mexico was that Mexican participants had a much stronger need to feel safe at school, which requires secondary education teachers to take action against bullying.

INTRODUCTION

In response to the trend of inclusive education, an increasing number of students with autism spectrum disorder (ASD) are now being educated in mainstream schools (Fleury et al., 2014; Saggers et al., 2017). Their difficulties with social communication and interaction (American Psychiatric Association, 2022), as well as their struggles with task performance, have been perceived as barriers to their inclusive education (Salceanu, 2020; Soto-Chodiman et al., 2012; Stephenson et al., 2021). Along these lines, parents have indicated that some mainstream schools are not truly inclusive (Roberts & Simpson, 2016) and may have a more negative than positive impact on the well-being of their autistic children (McKinlay et al., 2022). This issue seems to be particularly pronounced in secondary education, where several autistic individuals have recalled negative and distressful school experiences due to a lack of acknowledgment and understanding of their unique needs (Goodall, 2019; Goodall & MacKenzie, 2019; Portway & Johnson, 2003). Therefore, it is crucial to identify the needs of autistic adolescents enrolled in mainstream educational settings. Additionally, as stated by Lundy (2007), it is essential to explore students' own perceptions and insights in order to inform and develop educational practice and policy.

Research suggests that inclusive education of autistic students in (mainstream) secondary schools can be enhanced through several key provisions, including a school environment that is calm and structured, optimal social support and effective teaching strategies (Esqueda Villegas et al., 2022). For instance, many autistic students have a need for sensory accommodations at the school and classroom level (Aubineau & Blicharska, 2020; Horgan et al., 2023). In secondary schools, autistic students can be easily distressed by having to switch from one classroom to another (and therefore from one teacher to another), coping with large class sizes and navigating crowded corridors (Goodall, 2018). Consequently, they might seek quiet spaces in which they can retreat from the loud and overwhelming environment (Aubineau & Blicharska, 2020). Previous studies have shown that when schools lack safe spaces specifically designated for autistic students, such learners employ alternative coping strategies such as hiding in the toilets or avoiding noisy areas like the cafeteria (Goodall, 2019; Horgan et al., 2023).

Providing appropriate physical spaces in schools can enhance the motivation of autistic students (Lebenhagen & Dynia, 2024). For example, as autistic people may be able to process more information at any given time compared to non-autistic people, the use of visual supports in the classroom to complement verbal information can increase their knowledge and engagement with a topic (Remington et al., 2019). At the same time, this increased perceptual capacity might lead to substantial sensory challenges within the classroom environment, potentially compromising task performance (Irvine et al., 2024; Remington et al., 2019). In this sense, the overall noise—resulting from both the lesson and conversations among classmates—often disrupts their attention to the teacher's instructions, leading to feelings of exhaustion and frustration (Costley et al., 2021; Howe & Stagg, 2016). Another common (negative) response to noisy classrooms, as reported by several autistic students in Goodall (2018), was increased stress. Given that many autistic students experience difficulties in regulating their emotions, finding ways to overcome such feelings can be challenging but crucial for their academic performance (Ashburner et al., 2010). In line with this, some autistic students show significant concern about their academic achievements and meeting deadlines (Jarman & Rayner, 2015). Ashburner et al. (2010) found that 43% of the 28 autistic students (aged between 6 and 10 years) in their research were inclined towards perfectionism and would get irritated when things would not go as expected. Similarly, an autistic male with Asperger Syndrome in the study of Portway and Johnson (2003, p. 438) reported feeling unhappy and depressed at school because his work was not 'perfect enough'. Ashburner et al. (2010) suggest that the self-imposed expectations that autistic students have regarding completion of tasks and assignments perfectly may become more pronounced during secondary education due to the increased demands of this specific educational environment compared to primary education.

Socializing at school can be challenging for autistic students, especially in secondary education where there is a high pressure for them to 'fit in' (Costley et al., 2021). While some autistic students struggle to initiate interactions with peers and feel compelled to mask their behaviours, having peer support can play a crucial role in helping them manage difficulties at school (Crompton et al., 2023). Unfortunately, research has found that compared to their peers, autistic children have lower chances of forming reciprocal friendships, with autistic boys more likely than autistic girls to face rejection by peers (Dean et al., 2014). That being said, it is quite common for autistic students to experience bullying in the school setting (Campbell

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et al., 2017; Maïano et al., 2016; Saggers et al., 2017), especially if they are enrolled in mainstream schools (Humphrey & Hebron, 2015; Sterzing et al., 2012). Although many autistic students report these bullying incidents, teachers' efforts are sometimes insufficient, as the perpetrators might persist with the aggressive behaviours (Saggers et al., 2017). It is therefore possible that autistic students have a strong desire to develop a sense of belongingness in the (mainstream) school environment (Esqueda Villegas et al., 2022).

Teachers can support the inclusion of autistic students in their classroom (Saggers, 2015; Salceanu, 2020). Yet, a study conducted in the United Kingdom pointed out that pre-service teachers worry about their ability to provide tailored support to these learners (Ravet, 2018). Other teachers have expressed that they have learned by trial and error what the needs of their autistic students really are (Soto-Chodiman et al., 2012). This is worrisome given that in secondary education teachers have less time to interact and get to know their (autistic) students compared to primary education (Portway & Johnson, 2003). Additionally, larger class sizes make it difficult for teachers to have one-on-one interactions with autistic learners (Goodall, 2018). Still, meaningful teacher–student interactions remain fundamental for developing positive classroom relationships (Bolourian et al., 2022; Lebenhagen, 2024). Caring teachers who show involvement and understanding of autism can make a lasting difference in the lives of autistic students and their families (Anderson et al., 2024). In terms of teaching strategies, young autistic adults and teens highly value teachers who provide step-by-step directions (Anderson et al., 2024) and who adjust the tasks according to their individual needs (Goodall, 2018; Stephenson et al., 2021). Additional explanations are also useful for autistic students who 'get stuck' during tasks (Hasson et al., 2024) or struggle to keep up with the pace of the lesson (Tamm et al., 2020). Unfortunately, many autistic students believe that teachers do not offer sufficient feedback or allocate enough time to ensure that they understand the materials well (Lebenhagen, 2024). Yet, allowing the autistic student to become familiar with the task materials (Fleury et al., 2014) and providing explicit information on how to move forward may reduce their anxiety and stress levels (Fleury et al., 2014; Minnaert, 2013). As pointed out by Minnaert (2013), teachers should act as allies rather than adversaries in students' goal pursuit or attainment, which may require adopting alternative instructional strategies specifically for autistic learners.

While the existing literature provides insights into the issues faced by autistic students during secondary education, it is important to recognize that some autistic communities remain under-researched. Notably, many studies have focused on autistic participants from the United States or English-speaking populations (Bak et al., 2023). Moreover, as Pellicano et al. (2014, p. 765) have pointed out, there is still an ongoing need for research that autistic individuals (and those who provide them with day-to-day support) find valuable and useful, such as studies on 'effective ways to educate autistic children'. This research gap extends to the Netherlands and Mexico, two United Nations member states committed to prioritizing inclusive education.

Two countries, one shared goal: working towards a more inclusive approach within schools

For this study, data were collected from current and former students in mainstream secondary schools in the Netherlands and Mexico. These countries were selected due to their distinct education systems, approaches to supporting students with special educational needs (SEN) and the unique contextual factors influencing students' learning experiences. It is interesting to explore and compare them since cross-country studies allow researchers to evaluate the impact of school systems, as well as their cultural and social structures on students' academic and non-academic outcomes, which results in an exchange of knowledge (Montt, 2011). Moreover, there is a pressing need for comparative research on inclusive education to better understand how to create more positive school experiences for students with SEN (García-Cedillo et al., 2015).

The Dutch secondary education system comprises three distinct levels: pre-vocational secondary education [VMBO in Dutch; 4-year program], senior general secondary education [HAVO in Dutch; 5-year program] and pre-university education [VWO or Gymnasium; 6-year program]. Enrollment in these levels is determined by the student's academic performance, with decisions made collaboratively between secondary schools and the student's primary school (Ministry of Education, Culture and Science, 2007). On the other hand, Mexican (general) secondary education is divided into lower and upper secondary levels (3-year programs). Mexican students typically begin lower secondary education between the ages of 11 and 14, while upper secondary education enrollment occurs between ages 15 and 18 (Gobierno de México, 2022). The education system is further divided into public and private schools. While private schools can be better equipped (Lavin et al., 2022), the majority of Mexican students attend public schools (García-Cedillo et al., 2015). Unlike other countries, the Mexican government does not provide financial support to private schools or funding for parents to enrol their children with SEN in these settings (García-Cedillo et al., 2015). Interestingly, in both public and private schools, families are responsible for covering additional costs for their children with SEN, such as hiring teaching assistants or acquiring specialized materials (Binelli & Rubio-Codina, 2013; García-Cedillo et al., 2015; Lavin et al., 2022). Wendelspiess (2010) points out that the socioeconomic status between students attending public

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and private education differs significantly. As such, those attending public education might face greater difficulties in accessing the additional support and/or physical resources they need.

To support SEN students, the Netherlands implemented the Education Act for Students with Special Needs in 2014 (Gubbels et al., 2018). Even though students with disabilities in the Netherlands can (still) enrol in special education, this policy predominantly encourages the integration of all students into mainstream schools, unless their educational needs are 'severe' and would benefit more from specialized education (UNESCO, 2017). According to the most recent report of the Inspectorate of Education (2023), whether Dutch mainstream schools are becoming more inclusive remains to be further investigated. Previous studies indicate that inclusive practices pose challenges for Dutch teachers, particularly due to time constraints (Civitillo et al., 2016) and the need for differentiation in order to address the needs of all students (van Doodewaard & Knoppers, 2021).

To create a more inclusive educational system in Mexico, the General Law for the Inclusion of People with Disability was introduced in 2011 by the Mexican government (Diario Oficial de la Federación, 2011). In addition to this initiative, Mexico has enacted a General Law protecting the rights of autistic individuals (Diario Oficial de la Federación, 2015). According to Article 17 section IV, both public and private educational institutions are forbidden from refusing the enrollment of autistic students. Furthermore, in section V, any form of aggression from teachers and classmates against autistic students is prohibited (Diario Oficial de la Federación, 2015). In terms of more specific educational strategies, the regulations from the Ministry of Public Education declare that Mexico will establish an inclusive educational model to include autistic students in mainstream schools, taking into account their skills and potential (Diario Oficial de la Federación, 2016). However, to the best of our knowledge, there is currently no public information on how or if said model is being implemented in practice.

Contextual factors, such as differences in resources and learning environments, are likely to influence the educational experiences of autistic students in each country. For example, the Netherlands has invested significantly more in education than Mexico (OECD, 2021, 2024a, 2024b). Unfortunately, a limited access to (financial) resources may hinder the extent to which Mexican schools can meet the needs of students with SEN (García-Cedillo et al., 2015). Another challenge is that class sizes in Mexico are among the largest within OECD countries (OECD, 2012). In general, small(er) class sizes are recognised as beneficial for students, as they provide more opportunities for teacher–student interaction and tailored instruction to meet diverse learning needs (OECD, 2012). This is particularly the case for many autistic students who have a clear preference for small class and school sizes (Goodall, 2018; Sproston et al., 2017).

Interestingly, recent results from the Programme for International Student Assessment (PISA) test revealed differences between Dutch and Mexican students' motivation and learning strategies. Only 35.2% of 15-year-old students in the Netherlands reported feeling (intrinsically) motivated for learning new things at school, ranking significantly below the OECD average (OECD, 2024c). In contrast, 80.5% of their Mexican counterparts reported intrinsic motivation, exceeding the OECD average (OECD, 2024c). Despite these differences in motivation, Dutch students were more proactive in their approach to learning, with 49% reporting that they frequently ask questions when they do not understand the material, compared to 41.2% in Mexico (OECD, 2024c). Other data further highlights differences in the impact of teacher support on Dutch and Mexican students' engagement and learning strategies. For instance, in Mexico, 55.3% of students who received frequent teacher support reported attempting to connect new material to prior knowledge (OECD, 2024c). In contrast, only 46% of Dutch students reported employing this strategy, which is below the OECD average (OECD, 2024c).

While the OECD data underscores several differences between these two countries, the Netherlands and Mexico share a commitment towards inclusive education. This goal is reflected in their endorsement of international agreements such as the Salamanca Statement (in 1994), the United Nations Convention on the Rights of Persons with disabilities (in 2006) and Sustainable Development Goal 4 embedded within the UNESCO Incheon declaration (in 2015) from the United Nations 2030 Agenda. When it comes to including autistic students, an observational study revealed several similarities in teacher–student interactional patterns in the Netherlands and Mexico (Esqueda Villegas et al., 2025). This study found that Dutch and Mexican teachers largely lacked autonomy-supportive practices and expressions of affection. However, both groups provided step-by-step guidance, which often increased autistic learners' engagement (Esqueda Villegas et al., 2025).

Although the literature indicates that both countries have worked towards a more inclusive approach within schools, available data offer a more general overview of students with disabilities and do not provide specific information about autistic students and the type of supports that they particularly like or dislike in secondary education. This means that the voices of Dutch and Mexican autistics have not yet been represented in research. Yet, as the autistic community in one study emphasized, only autistics 'know exactly what kind of support' is best suited for them (Haar et al., 2024). Given that sometimes teachers' perception on the needs of autistic students are not always in line with what the students may wish themselves (Esqueda Villegas et al., 2022), it is indeed crucial to identify these needs from their own voices. This likely provides valuable and specific information about the individual differences that autistic students in secondary

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education in the Netherlands and Mexico have, enabling us to identify distinct 'need-profiles' within this group of learners. To address this gap in the literature, our study was guided by the following research questions:

1. What are the different needs-profiles of autistic males in the Netherlands and Mexico in secondary education and how are they aligned with regard to their most/least pressing needs?
2. What are the most striking similarities and differences between the needs reported by male autistic students in the Netherlands and Mexico?

METHOD

Design

We used Q-methodology, a combined quantitative and qualitative technique (Ramlo, 2016), to distinguish groups of autistic students with different need-profiles in secondary education. The aim of Q-studies is to find patterns in participants' (subjective) beliefs, thoughts or opinions about a specific topic (Lee, 2017; McKeown & Thomas, 2013; Shemmings & Ellingsen, 2012). For this, participants are usually asked to rank-order statements in a grid (this process is called Q-sorting), based on how meaningful these statements are to them (McKeown & Thomas, 1988; Ramlo, 2016). Participants with similar sorting patterns are grouped in a 'factor' (Brown, 1980), representing a qualitatively unique point of view (Ramlo, 2016). The purpose of Q is not to generalize findings, but to show which patterns of subjective thought exist (Lee, 2017; Watts & Stenner, 2012). Therefore, it is common to have a small group of participants (McKeown & Thomas, 1988; Ramlo, 2016; Watts & Stenner, 2012). A recent overview of Q methodological studies found that this methodology can be applied even with as few as six research participants (Lundberg & de Leeuw, 2024). In educational research, Q studies have an average group of 37 participants, although this number is lower in cross-country studies, where a total of 24–34 participants have been reported (Lundberg et al., 2020). Indeed, it has been emphasized that the main requirement in Q should be to have 'enough subjects to establish the existence of a factor for purposes of comparing one factor with another' (Brown, 1980, p. 192).

Participants

Autistic individuals who previously or currently attended mainstream secondary education were invited to participate in this research, regardless of their gender. Recruitment was conducted both online and in person. For online recruitment, advertisements were shared in social media (i.e., autism-focused Facebook groups) and professional platforms such as LinkedIn. For in-person recruitment, researchers visited secondary schools and explained the nature of the study to the school coordinators. Participants were included if they fulfilled the following criteria: (a) a diagnosis of ASD according to the DSM-V requirements, or a previous DSM-IV diagnosis, such as Asperger's Syndrome or Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS); (b) were between 13 and 25 years old; (c) previously or currently attended a mainstream secondary school; and (d) had their main residence in the Netherlands or Mexico. Participants were not excluded if they had any other co-occurring conditions (for example, attention deficit hyperactivity disorder).

Surprisingly, many responses were received from autistic females. Given the literature highlighting the differences in school experiences between autistic females and males (Baldwin & Costley, 2016), and the limited exploration of the autistic female perspective (Cridland et al., 2014), we conducted a separate analysis of the specific needs of autistic females. The analysis revealed unique need-profiles showing that these autistic females were more socially oriented than their male counterparts. As a result, these findings are not included in this paper but are reported elsewhere (Esqueda Villegas et al., submitted). The final group of participants presented in this paper consisted of 44 autistic males (22 from the Netherlands, 22 from Mexico), with a mean age of 18.1 years (SD = 3.34). To align with the preference for Identity-First Language (IFL) within the (younger) autistic community (Buijsman et al., 2023; Kenny et al., 2016; Lei et al., 2021), this paper uses terms such as 'autistic males' or 'autistic students' when referring to the research participants.

Measurements—Statements

Key findings from an earlier systematic review (Esqueda Villegas et al., 2022) regarding the inclusive education of autistic students were the basis for the collection of statements used in our Q-sort (Ramlo, 2016). The initial set of statements and the overall sorting procedure were piloted with six autistic individuals—three from the Netherlands, three from Mexico—who voluntarily provided feedback during a one-time, one-on-one online meeting lasting approximately 1 h. Eligibility for the pilot required participants to have an ASD diagnosis (including Asperger's syndrome or PDD-NOS), direct experience in a mainstream secondary school (either in the Netherlands or Mexico), and to be between 16 and 25 years old. Subsequently, statements were added, rephrased or deleted by the research team. The statements covered potential student needs about the school setting, teaching methods and tools, teachers, classmates and feelings at school. Examples of statements are as follows: 'I need/needed a classroom free of noise' (school and classroom setting); 'I need/needed to be able to work on my laptop or tablet in class' (teaching methods and

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tools); 'I need/needed for my teachers to show they care about me' (teachers); 'I need/needed to have a friend I can trust' (classmates); 'I need/needed to feel safe at school' (feelings at school). Statements were presented to the participants in their native-language (Dutch or Spanish) and were translated to the English language for the purpose of this publication. Table 1 displays the final list of 36 statements (known as Q-sample) with the average ranking of each factor from each country.

Procedure

We developed two online Q-sorts (one in Dutch and one in Spanish) in Qualtrics. However, some of the Mexican participants did not have access to a laptop or internet connection at school ($n=6$). Therefore, an alternative paper-based Q-sort was designed for them.

Online participants were provided with an information and consent form before accessing the Q-sort in Qualtrics. Participation was voluntary and anonymous. Autistic individuals could optionally disclose their age, gender, school level (in case they were still in secondary education), and the diagnosis they had received (i.e., Asperger syndrome). For Mexican participants, an additional question was included regarding the type of school they attended or had previously attended (public or private).

After consent was granted, online participants could see the written instructions and a video tutorial on the Q-sorting process. Subsequently, the 36 statements representing potential needs were displayed. Initially, participants sorted these statements into three groups: 'of little need', 'neutral' and 'definitely need'. They accomplished this by dragging and dropping the statements into the corresponding boxes on the right side of their screens. Next, participants allocated statements from the 'little need' group into the −4, −3 and −2 cells of the grid (see Figure 1). The same process was repeated for statements categorized as 'neutral' (placed in the −1, 0 and +1 cells), and the 'definitely need' statements (positioned in the +2, +3 and +4 cells). It is important to highlight that only one statement was allowed in each cell of the grid. Despite this forced-distribution, participants had 'complete freedom in placing the items' (McKeown & Thomas, 1988, p. 34).

In the paper-based version, participants received written instructions, a consent form, a sheet of paper featuring the Q-sort grid (see Figure 2) and 36 printed cards containing the statements. Unlike the online version, participants did not view a video tutorial on the Q-sorting process, as the dragging-and-dropping procedure was specific to the online format. Instead, a trained researcher provided a real-time demonstration of the sorting procedure. Consistent with the online procedure, participants were instructed to categorize the statements into three distinct piles and subsequently place only one statement in each cell of the grid. The trained researcher and/or a school coordinator were available to address any questions during the session.

After the Q-sorting process, all participants—both from the online and paper-based versions—had the opportunity to provide a written explanation for why they selected specific statements as their least/most important needs, which the majority of participants did ($n=36$). These (anonymized) explanations can be found in the Appendix S1. Ethical approval was granted by the Pedagogy and Educational Sciences ethics review chamber from the Faculty of Behavioral and Social Sciences of the University of Groningen.

Data analysis

We used KADE—a desktop application for Q-methodology—to distinguish groups of autistic (male) students with different need-profiles in secondary education (Banasick, 2019). The Q-sorts of Dutch and Mexican participants were entered (and subsequently analysed) separately into the software. Afterwards, KADE calculated the correlations between participants' ranking of statements, meaning that a by-person factor analysis was performed (McKeown & Thomas, 2013; Watts & Stenner, 2012). We explored a handful of solutions using Brown's Centroid Factor Analysis with Varimax rotation (Brown, 1980). KADE automatically flagged those participants who significantly loaded on a particular factor at $p<0.05$. To decide which factor solution best represented the data, the first three authors discussed the output data generated by KADE. The output files included the eigenvalues, percentage of explained variance, correlations between factors, participants loading significantly on a factor and the distinguishing statements. Following the recommendations from Watts and Stenner (2012), only factors with eigenvalues above 1.0 were retained for further exploration. Additionally, solutions with higher percentages of explained variance were prioritized (Watts & Stenner, 2012). Lastly, since the overarching aim of the study was to include as many voices of autistic students as possible, the research team paid particular attention to the number of participants with significant loadings on each factor.

Once a factor solution was selected for each country, a qualitative interpretation of the point of view of autistic males was carried out. For this, we took an holistic approach and analysed the entire configuration of statements within each factor (Watts & Stenner, 2012). The distinguishing statements of each factor and the explanations that autistic participants provided regarding their least/most pressing needs were also crucial for the analysis.

RESULTS

We selected a three-factor solution for both the Dutch and Mexican autistic males, which explained 39% and 33% of the total variance, respectively. Output data from KADE revealed that five participants from the

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TABLE 1 Statements and the average ranking of factors from the Dutch and Mexican autistic males.

		Dutch participants			Mexican participants		
Theme	**In mainstream secondary school, I need/needed…**	**Factor1**	**Factor 2**	**Factor 3**	**Factor A**	**Factor B**	**Factor C**
School and classroom setting	1. A classroom free of noise	**−2**	**3**	**1**	−3	−1	−2
	2. A structured routine at school	−1	**4**	1	**−3**	**0**	**4**
	3. A small class	**−2**	3	2	**−4**	**0**	**−2**
	4. A quiet space to go to when there is too much noise in class	**−3**	**4**	**−1**	0	**−2**	0
	5. To have fixed seats in the classroom	**−4**	**2**	**−1**	**2**	**−3**	**−1**
	6. For my school to have different times for class breaks	−4	**0**	−4	**−4**	**−4**	**0**
Teaching methods and tools	7. Activities in class that help me learn	**0**	−2	−2	1	2	**3**
	8. To work in small groups	1	0	**−3**	**−3**	**0**	**2**
	9. A teaching assistant to help me with my tasks in class	−3	**1**	−4	**4**	**−3**	**2**
	10. More time to finish my school activities	1	1	−1	1	1	2
	11. More time to finish my exams	**−1**	−2	−3	0	−1	**3**
	12. To be able to work on my laptop or tablet in class	**−1**	**−4**	**3**	**−2**	**−4**	**0**
	13. Having school materials presented in different ways, such as pictures and videos	**−3**	**0**	**4**	−2	−2	**1**
Teachers	14. That teachers are approachable	2	**0**	1	2	**0**	1
	15. That my teachers give me clear and detailed instructions on what I have to do	3	2	**4**	2	**4**	3
	16. That my teachers help me when I do not understand difficult activities	3	**0**	3	0	1	**4**
	17. For my teachers to spend more time with me during class	**0**	−3	−3	**−1**	−3	−4
	18. For my teachers to show they care about me	**1**	−2	−2	−1	−1	−1
	19. For my teachers to be understanding of my autism	**0**	1	1	3	2	1
	20. That my parents communicate my needs to my teachers	0	**−1**	0	**1**	**−1**	**−4**
	21. To be able to confide in teachers	0	−1	1	**3**	0	0
	22. That teachers understand when I want to be left alone	1	1	0	1	**−2**	0
	23. Individual help from my teachers	1	−1	0	−2	−1	**1**
	24. For my teachers to understand the way I learn	2	2	**3**	1	3	1
Classmates	25. To learn tools to communicate with my classmates at school	−2	−3	−2	0	1	**−1**
	26. To have a friend I can trust	2	**0**	1	−1	**1**	−1
	27. To collaborate with my classmates during class	−2	−4	−1	**0**	**−2**	**−3**
	28. For my classmates to accept me as I am	1	**−1**	2	**−1**	**1**	**−2**
	29. For my classmates to take my autism into consideration	−1	1	0	0	−1	**−3**
	30. To build friendships at school	2	**−3**	2	**−1**	**0**	**−2**
Feelings at school	31. For my school to take action against bullying	−1	−1	0	4	3	**−1**
	32. To feel that I am part of this school	−1	−1	0	**1**	**2**	**−3**
	33. To feel safe at school	**0**	2	2	3	2	**0**
	34. To learn how to handle my emotions (such as being stressed, sad or angry) at school	**4**	**1**	**−1**	**2**	**4**	**1**
	35. To be treated as every other student of my class	**3**	−2	−2	−2	**1**	−1
	36. To know how to adapt to unfamiliar situations	**4**	**3**	**−1**	**−1**	3	2

Note: Distinguishing statements are marked in bold.

Netherlands and one from Mexico did not have a significant loading on any single factor (that is, the sorting configuration did not align with those of other participants) or were confounded. Confounded cases were identified if they had significantly similar sorting patterns at the $p<0.01$ level for two or more factors. These non-prototypical participants were excluded from further analysis, as such cases do not truly 'approximate,

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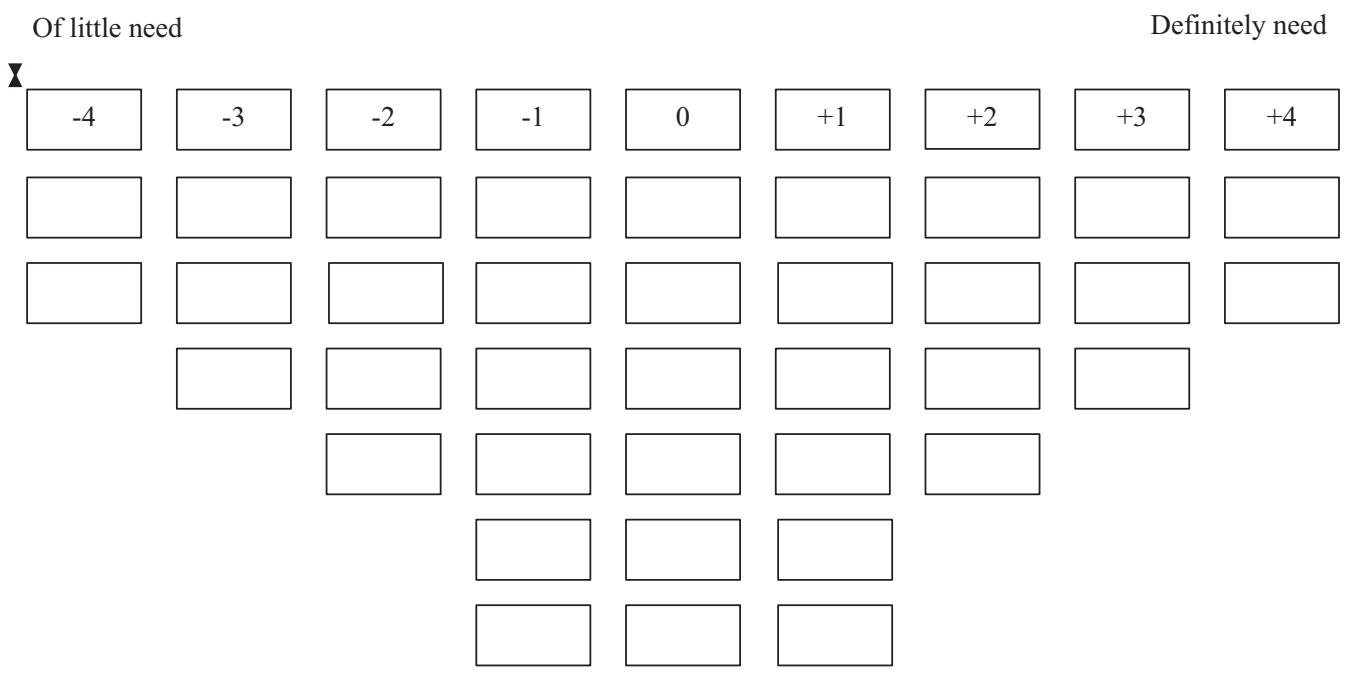

FIGURE 1 Q-sort grid.

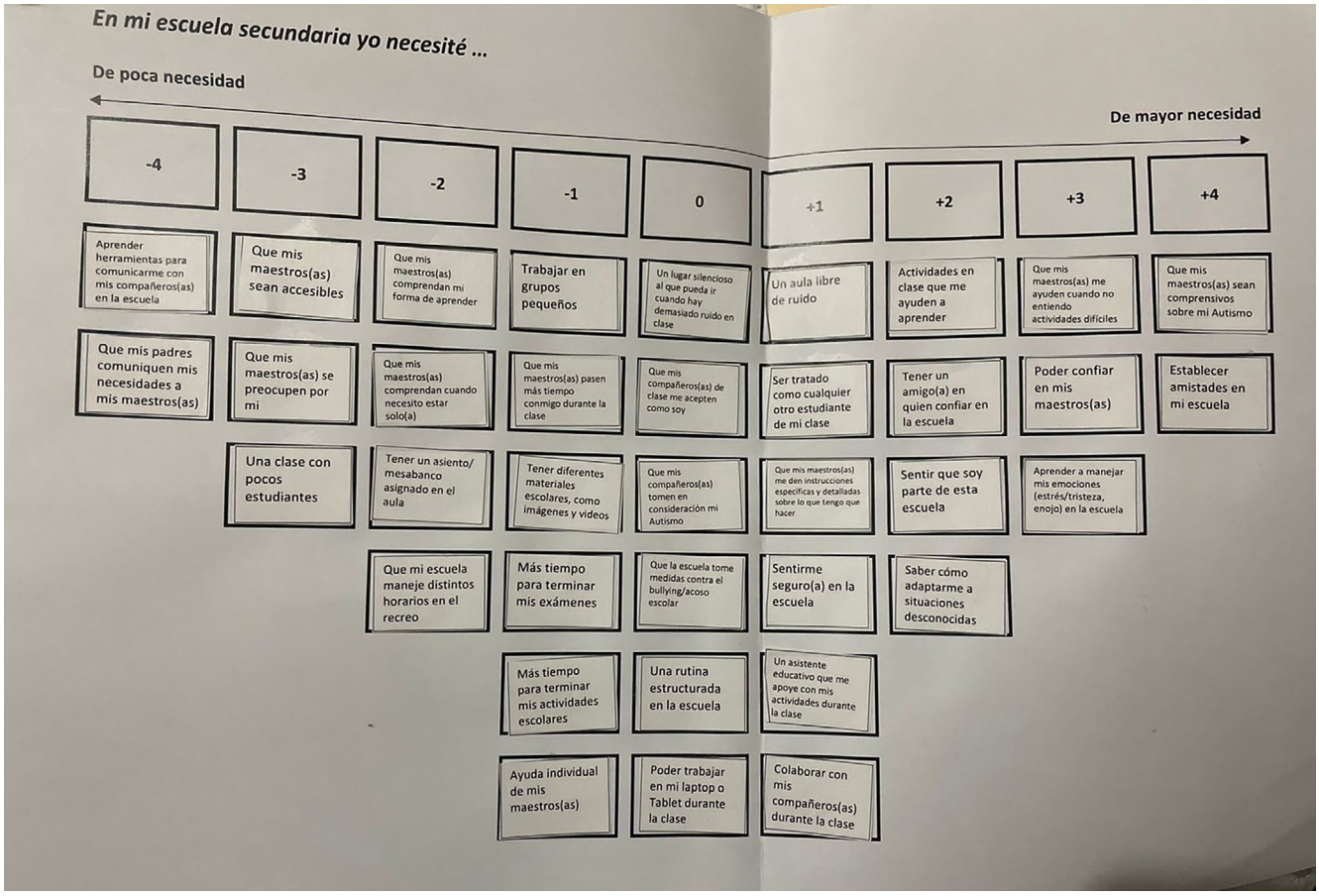

FIGURE 2 Example of the (Spanish) paper-based Q-sort.

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exemplify or define the viewpoint of a particular factor' (Watts & Stenner, 2012, p. 130).

The correlation between Factors 1 and 3 (Dutch participants) ranged from −0.08 to 0.30, while the correlation between Factors A and C (Mexican participants) ranged between 0.10 and 0.33. The characteristics of autistic participants in Factors 1–3 (participants in the Netherlands) and Factors A–C (participants in Mexico) are presented in Tables 2 and 3, respectively.

RQ1: Need-profiles of Dutch and Mexican autistic males

In the following sections, we provide a (qualitative) interpretation for each factor, reflecting a different point of view. We indicate statements as 'Item #:' followed by its average factor ranking. For example, 'Item23:+3' illustrates that statement 23 ('I need/needed individual help from my teachers) was ranked as +3 within the factor being described.

Factor 1: 'Emotion regulation' ($n=7$)

The seven autistic Dutch males in Factor 1 seemed to want to know how to regulate their emotional reactions, since it is 'A difficult topic for people on the spectrum and learning about it will promote development' (Participant 7). Their main needs were to learn how to handle their emotions (Item34:+4) and adapt to unfamiliar situations (Item36:+4). The allocated time for task completion and waiting for teacher's support appeared to elicit distressing emotions in this sample of autistic students:

> Maybe a bit selfish but…it often takes a long time before I get help with an assignment that I don't understand. I need faster help so that I don't feel like I have to postpone things, which causes me to build up stress…
>
> (Participant 6)

The need for emotion regulation seemed to have a social drive, as this sample of autistic males also indicated a need to build friendships at school (Item30:+2), have a friend they could trust (Item26:+2) and be treated as every other student (Item35:+3). Conversely, participants in this factor seemed comfortable with the school and classroom organization. They expressed little need for having fixed seats in the classroom (Item5:−4), different time for class breaks (Item6:−4), a quiet space to go to (Item4:−3) or a small class (Item3:−2). Participant 6, for example, mentioned that 'Whether a class is small or large makes no difference to me. The personality of the students often remains the same'. Figure 3 illustrates the model sorting pattern of Factor 1.

Factor 2: 'Autism-friendly environment' ($n=5$)

Contrary to Factor 1, the five autistic Dutch males in Factor 2 had environment-centered needs, since they seemed more susceptible to overstimulation. They were

TABLE 2 Sociodemographic information of participants in the Netherlands.

Factor	Participant #	Age	School level	Graduated or currently in secondary education	Self-reported diagnosis
1 'Emotion regulation' ($n=7$)	2	17	HAVO	Currently enrolled	Asperger syndrome
	6	21	VWO and HAVO	Graduated	PDD-NOS
	7	23	VWO and HAVO	Graduated	Classic autism
	11	13	HAVO	Currently enrolled	Autism spectrum disorder
	14	16	VMBO	Currently enrolled	Not specified
	15	16	VMBO	Currently enrolled	PDD-NOS
	16	17	HAVO	Currently enrolled	PDD-NOS
2 'Autism-friendly environment' ($n=5$)	1	17	VWO	Currently enrolled	Autism spectrum disorder
	12	19	HAVO	Currently enrolled	PDD-NOS
	17	18	VWO	Currently enrolled	Autism spectrum disorder
	18	18	VWO	Currently enrolled	Asperger syndrome
	20	15	VMBO	Currently enrolled	Autism spectrum disorder
3 'Teachers' involvement and adaptive support' ($n=5$)	3	18	VWO	Currently enrolled	Autism spectrum disorder
	4	19	VMBO	Graduated	Asperger syndrome
	8	18	HAVO	Graduated	PDD-NOS
	19	15	HAVO	Currently enrolled	Autism spectrum disorder
	21	14	VMBO	Currently enrolled	Autism spectrum disorder

Abbreviations: HAVO, senior general secondary education; VMBO, pre-vocational secondary education; VWO, pre-university education.

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TABLE 3 Sociodemographic information of participants in Mexico.

Factor	Participant #	Age	School type	Graduated or currently in secondary education	Self-reported diagnosis
A 'To feel safe and understood' ($n=6$)	1	24	Private	Graduated	Asperger syndrome
	2	22	Public	Graduated	Asperger syndrome
	6	21	Private	Graduated	Autism spectrum disorder
	9	24	Public	Graduated	Asperger syndrome
	14	18	Not specified	Currently enrolled	Autism spectrum disorder
	17	17	Public	Currently enrolled	Asperger syndrome
B 'Structure and self-control' ($n=10$)	3	25	Public	Graduated	Asperger syndrome
	4	22	Public	Graduated	Autism spectrum disorder
	5	24	Private	Graduated	Asperger syndrome
	7	17	Public	Currently enrolled	Asperger syndrome
	8	25	Private	Graduated	Asperger syndrome
	12	15	Public	Currently enrolled	Autism spectrum disorder
	13	16	Public	Currently enrolled	Autism spectrum disorder
	16	17	Public	Currently enrolled	Asperger syndrome
	20	21	Public	Graduated	Autism spectrum disorder
	22	15	Private	Currently enrolled	Asperger syndrome
C 'Feeling supported in my learning orientation' ($n=5$)	10	15	Public	Currently enrolled	Autism spectrum disorder
	11	16	Public	Currently enrolled	Autism spectrum disorder
	18	16	Public	Currently enrolled	Autism spectrum disorder
	19	16	Public	Currently enrolled	Autism spectrum disorder
	21	14	Private	Currently enrolled	Asperger syndrome

mainly concerned about having a structured routine at school (Item2:+4), a quiet space to go to when there was too much noise in class (Item4:+4), and a classroom free of noise (Item1:+3). For instance, participants experienced heightened stress when they faced uncertainty and lack of structure:

> At my previous school there was never really a fixed classroom; there was constant change and therefore constant stress for me. At my current school I stay in the same classroom all day, and this also allows me to attend full school days.
>
> (Participant 17)

> I quickly become stressed if there is no structure at school. I don't know what to expect then.
>
> (Participant 18)

Autistic students in Factor 2 seemed to have less need for socializing with their peers. For instance, among their lowest-ranked statements were to collaborate with classmates during class (Item27:−4), build friendships at school (Item30:−3) or for classmates to accept them as they are (Item28:−1). To be able to work on their laptops/tablets (Item12:-4) was also less valued, as it was believed 'Absolutely necessary for nothing' (Participant 1). Figure 4 illustrates the model sorting pattern of Factor 2.

Factor 3: 'Teachers' involvement and adaptive support' ($n=5$)

The most important need of the five autistic Dutch males in Factor 3 seemed to be more involvement from their teachers and being provided with adaptive support. Among their highest-ranked statements were being able to work on their laptop or tablet (Item12:+3), having school materials presented in different ways, such as pictures and videos (Item13:+4) and that teachers provide clear and detailed instructions on what they have to do (Item15:+4). Students mentioned:

> Teachers vaguely indicate what we should do. Other [students] get it; I don't. Teachers don't change their instructions, so I say 'yes' but often I don't know what to do.
>
> (Participant 3)

> I sometimes forget what to do and if it is not clear then I don't know what to do and then I don't do anything.
>
> (Participant 19)

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FIGURE 3 Factor 1 'Emotion regulation'.

Although students in this factor highly appreciated adaptations, they had less interest in working in small groups (Item8:−3) and school having different times for class breaks (Item6:−4). Interestingly, the need for teachers to show they care about them (Item18:−4) was ranked lowest. Participant 3 further elaborated: 'They [teachers] don't have to care about me, but [they] have to help me'. This seems counterintuitive given that they *do* want teachers to acknowledge their (different) learning needs, which seems an expression of a need for involvement. Figure 5 illustrates the model sorting pattern of Factor 3.

The analysis of the Dutch factors (1–3) revealed several consensus statements, meaning that there was an agreement on the values designated to specific statements across the factors. Overall, Dutch participants needed greater teacher understanding of autism and recognition of their unique learning needs. The explanation provided by one Dutch student encapsulates this sentiment: 'I don't want to be treated like other students because I am not like most students in the class. I have autism and that is precisely why it is better for me to be treated differently. I am not like other students so don't treat me like other students'.

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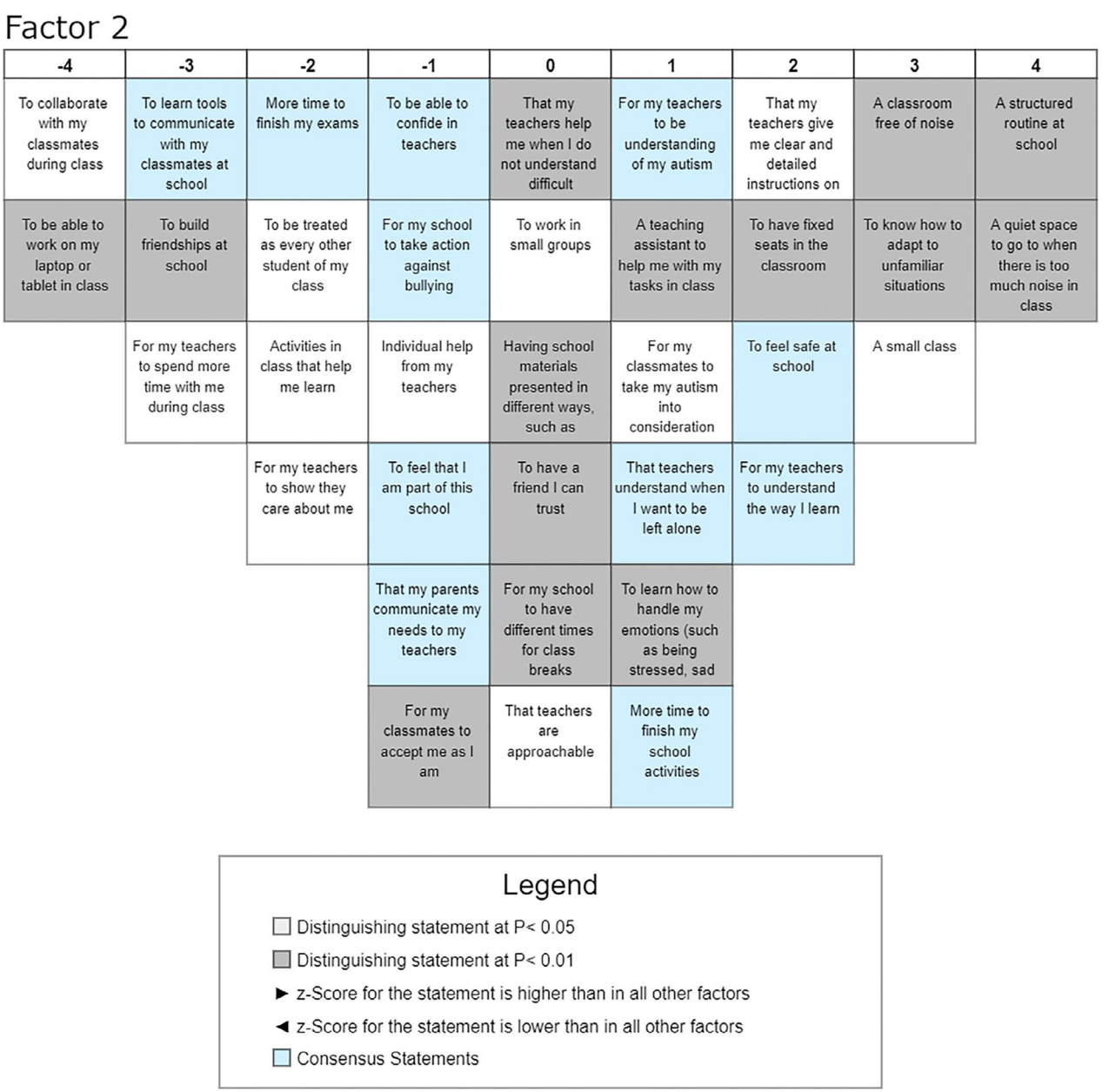

FIGURE 4 Factor 2 'Autism-friendly environment'.

Factor A: 'To feel safe and understood' ($n = 6$)

The six autistic Mexican males in Factor A had a strong need for feeling safe and understood in the secondary school setting. Among their highest ranked needs were to be able to confide in teachers (Item21:+3) and for their school to take action against bullying (Item31:+4). Participants elaborated:

> I had a classmate who insulted me. I suffered from bullying and although the school gave talks about bullying, they did not realize the classmate was mean to me.
>
> (Participant 14)

> I suffered from this throughout secondary education and it almost led me to suicide.
>
> (Participant 1)

Other distinguishing statements highlighted the need to feel part of school (Item32:+1) and a teaching assistant to help with their classroom tasks (Item9:+4). The school and classroom organization were of less concern. At the classroom-level, these students did not indicate a need to work in small groups (Item8:−3) or small classes (Item3:−4). At the school-level, different times for class breaks (Item6:−4) was 'Not considered important' (Participant 1), nor was having a structured routine (Item2:−3). Figure 6 illustrates the model-sorting pattern of Factor A.

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FIGURE 5 Factor 3 'Teachers' involvement and adaptive support'.

Factor B: 'Structure and self-control' ($n = 10$)

The 10 autistic Mexican males in Factor B seemed to need more structure and guidance on how to have self-control. Among their highest ranked needs were to know how to adapt to unfamiliar situations (Item36:+3), learn how to handle emotions (Item34:+4) and for teachers to give clear and detailed instructions (Item15:+4). Participants elaborated that sometimes teachers were unclear and did not provide informative feedback:

> The instructions my teachers gave were confusing, illogical or incomplete. Example: my Math teacher brought me to the front [of the class] to answer a division. I answered it because I did a mental calculation and the teacher told me it was wrong but it wasn't… The teacher never told me what my mistake was…
>
> (Participant 4)

Other high ranked statements emphasized their need to feel part of school (Item32:+2) and be accepted by classmates (Item28:+1). Similar to Factor A, organizational aspects were considered less essential. For example, it was less necessary for them to have different times for class breaks (Item6:−4), a quiet space to go to (Item4:−2) or a fixed seat in class (Item5:−3). Along this line, Participant 8 emphasized that 'The place does not

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-4	-3	-2	-1	0	1	2	3	4
A small class	A structured routine at school	To be treated as every other student of my class	To have a friend I can trust	To learn tools to communicate with my classmates at school	That my parents communicate my needs to my teachers	To learn how to handle my emotions (such as being stressed, sad	To be able to confide in teachers	For my school to take action against bullying
For my school to have different times for class breaks	To work in small groups	Individual help from my teachers	For my classmates to accept me as I am	To collaborate with my classmates during class	More time to finish my school activities	To have fixed seats in the classroom	For my teachers to be understanding of my autism	A teaching assistant to help me with my tasks in class
	A classroom free of noise	Having school materials presented in different ways, such as	To know how to adapt to unfamiliar situations	For my classmates to take my autism into consideration	Activities in class that help me learn	That my teachers give me clear and detailed instructions on	To feel safe at school	
		To be able to work on my laptop or tablet in class	For my teachers to show they care about me	A quiet space to go to when there is too much noise in class	For my teachers to understand the way I learn	That teachers are approachable		
			For my teachers to spend more time with me during class	More time to finish my exams	That teachers understand when I want to be left alone			
			To build friendships at school	That my teachers help me when I do not understand difficult	To feel that I am part of this school			

Legend

- Distinguishing statement at P< 0.05
- Distinguishing statement at P< 0.01
- ► z-Score for the statement is higher than in all other factors
- ◄ z-Score for the statement is lower than in all other factors
- Consensus Statements

FIGURE 6 Factor A 'To feel safe and understood'.

matter, but the [people in the] environment'. Figure 7 illustrates the model-sorting pattern of Factor B.

Factor C: 'Feeling supported in my learning orientation' ($n = 5$)

The needs of the five autistic Mexican males in Factor C were much more focused on their learning orientation and how teachers could facilitate it, since they 'Learn in an unusual way' (Participant 11). For instance, they desired teacher support when they did not understand complex activities (Item16:+4), a structured routine (Item2:+4), activities that helped them learn (Item7:+3) and more time to finish exams (Item10:+3). Participant 10 believed this was indispensable 'Because there are difficult activities that I do not understand'.

Contrary to Factors A and B, the students associated with this factor did not express a strong need for schools to take action against bullying (Item31:−1) or feel safe in this setting (Item33:0). Furthermore, they did not want classmates to take their autism into consideration (Item29:−3). In this line, participant 11 elaborated that 'It is something that I do not want them to know due to the change in treatment and lack of knowledge on the subject'. Figure 8 illustrates the model-sorting pattern of Factor C.

The consensus statements of the Mexican Factors A–C revealed an overall strong need for teachers' understanding of autism and the ways in which autistic individuals learn. This understanding included more time

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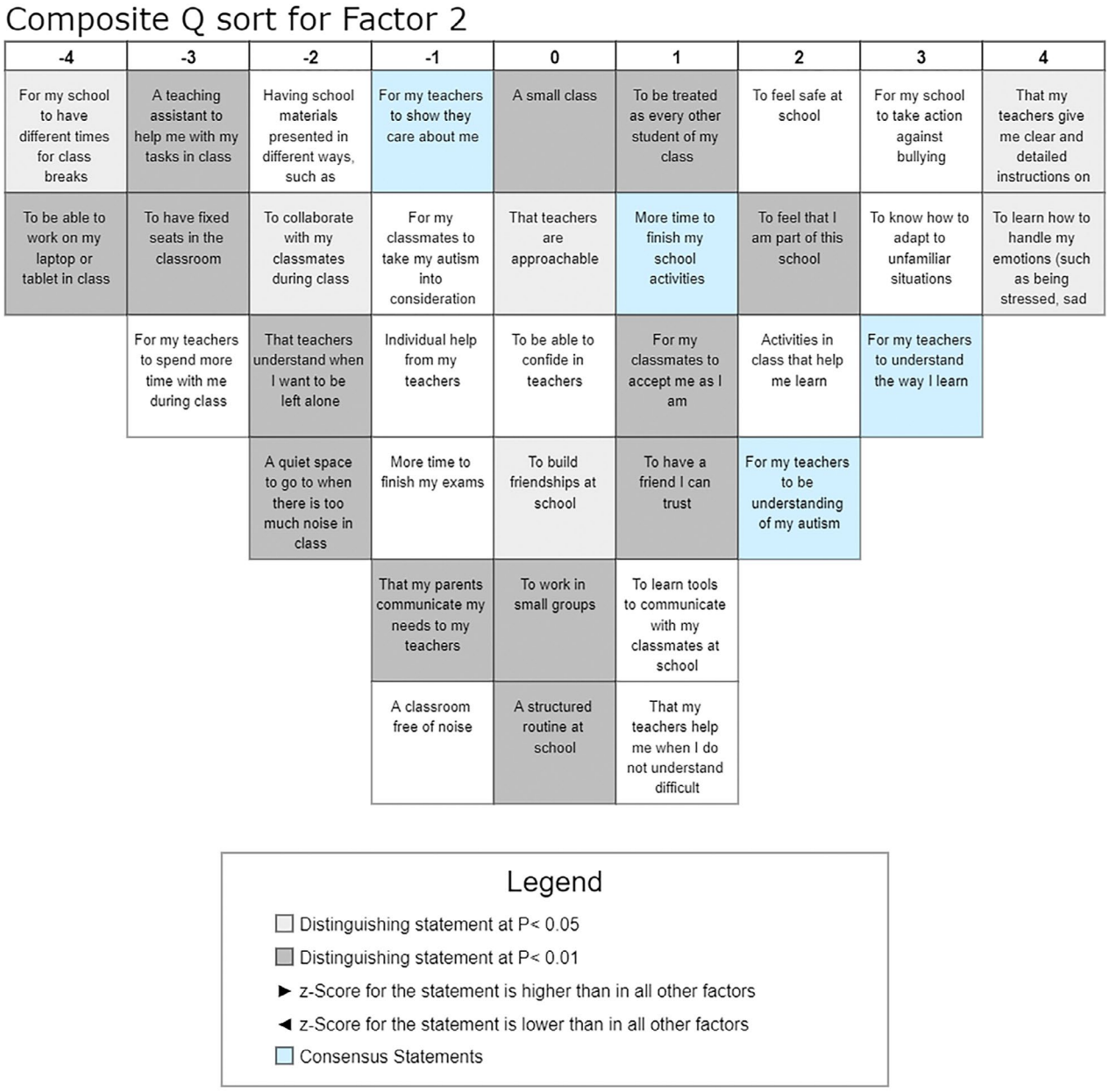

FIGURE 7 Factor B 'Structure and self-control'.

to finish school activities, as explained by one Mexican participant: 'I have psychomotor [difficulties] and writing is not easy for me. I am slow and I get confused with so many words and instructions'.

RQ2: Similarities and differences between autistic males in the Netherlands and Mexico

Among the cross-country similarities between the Dutch and Mexican autistic males, both factor 1 (Dutch participants) and factor B (Mexican participants) sorted statements related to emotion regulation particularly high. Additionally, both groups had a slight inclination towards social-related needs, such as building friendships and being accepted by classmates. Notably, factor B (Mexican participants) also wanted structure from teachers by receiving clear and detailed instructions on what they had to do, which (slightly) resembles factor 2 from the Dutch participants, who wished for an autism-friendly environment that has structure, predictability and quietness. Interestingly, factor 1 from Dutch participants and factors A and B from Mexican participants were quite similar in terms of what they do not need, which were statements associated with the school and classroom organization (for example, having different times for class breaks).

In terms of cross-country differences, although both factor 3 of Dutch participants and factor C of the Mexican autistic males seemed most concerned with teachers' involvement in their learning process, the Dutch factor

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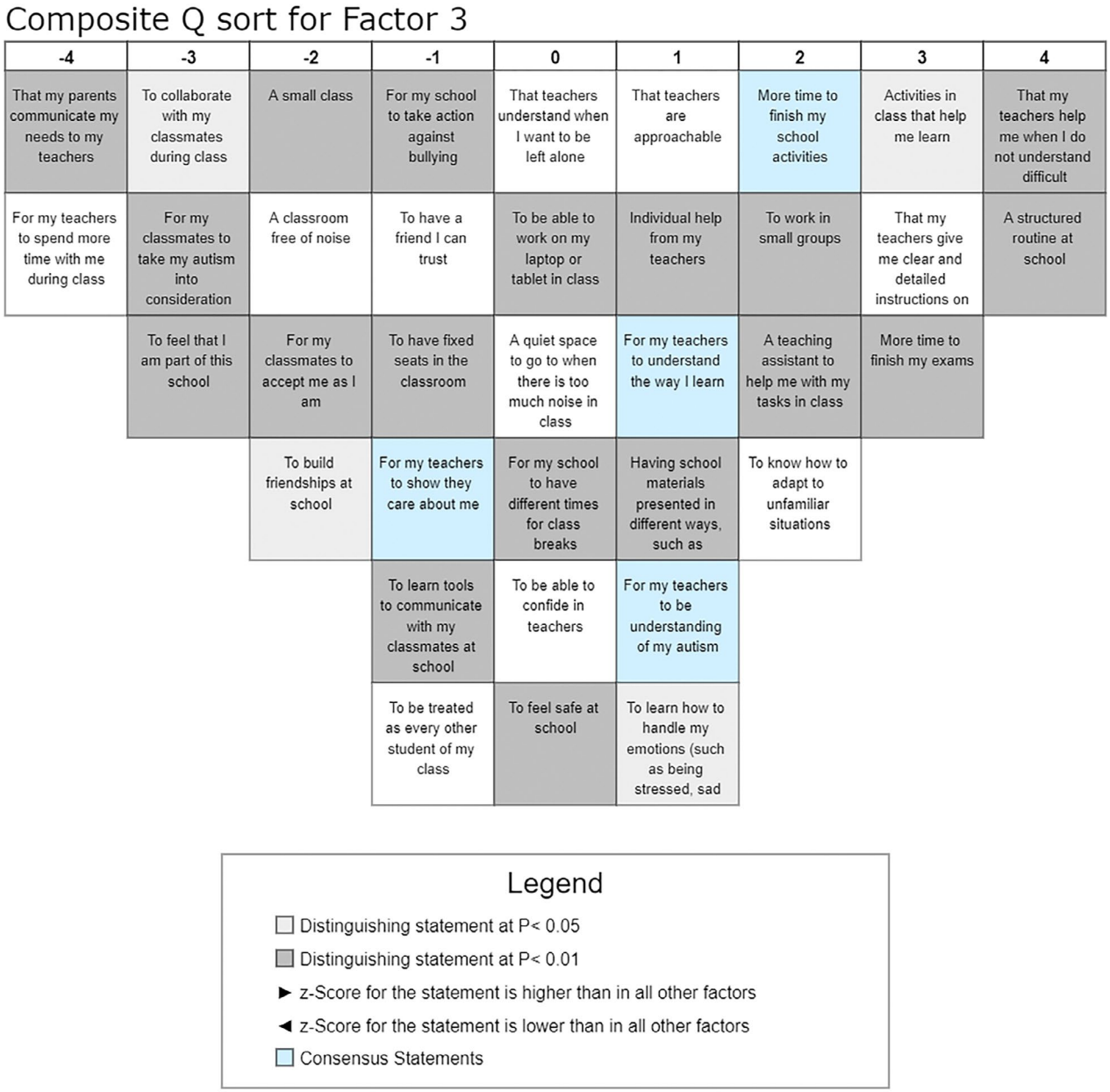

FIGURE 8 Factor C 'Feel supported in my learning orientation".

was slightly more focused on the teachers' presentation of the materials (for instance, using more visual supports and being allowed to work on a laptop/tablet), while the Mexican factor favoured having support during difficult activities and consideration of the allocated task completion time. Lastly, Mexicans in factor A were eager to have a safe school environment, whereas none of the Dutch factors seemed to have a pressing need for this.

DISCUSSION

The needs of autistic students have been understudied, especially from their own perspective (Costley et al., 2021; Goodall, 2019). Yet, this can provide teachers with valuable knowledge about how to better support this group of learners and avoid teachers' learning through trial and error (Soto-Chodiman et al., 2012). Additionally, the identification of their needs may contribute to more positive school experiences for autistic students (Goodall, 2019). Therefore, the main purpose of this research was to distinguish different need-profiles of autistic males during secondary education in the Netherlands and Mexico. These countries were selected for data collection for their distinct education systems, approaches to supporting students with SEN and contextual factors shaping students' learning experiences. Furthermore, we were interested in identifying similarities and differences between the two countries. Using Q-methodology, a

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mixed-method technique (Ramlo, 2016), we were able to identify three distinct need-profiles of autistic students during mainstream secondary education in each country.

The first factor, with seven (Dutch) autistic males, described a pressing need for emotion regulation and adapting to unfamiliar events. The five (Dutch) autistic males in Factor 2 were much more focused on having an autism-friendly school and classroom environment in order to learn, indicating they wanted a structured routine, a quiet space to go to, and a classroom free of noise. The five (Dutch) autistic males associated with Factor 3 wished for more teachers' involvement and adaptive support, specifying that they would appreciate if the school materials were presented in different ways and being able to use their laptops or tablets. Factor A, which consisted of six Mexican autistic males, wished for a safe school environment in which they feel understood, confide in teachers and not be bullied by peers. The 10 Mexican participants in Factor B desired self-control of their emotions (i.e., when something goes wrong) and more structure, particularly in terms of clear and detailed instructions of their teacher. The five Mexican autistic males in Factor C wanted help with their (individual) learning process, prioritizing needs related to teacher support during difficult activities, more time to finish exams and activities that enhance their education. Although the needs of autistic students were quite heterogeneous, there was consensus across factors that teachers needed a better understanding of autism, and particularly the ways in which autistic people learn. In this sense, previous research highlights that a rigid teaching approach with little room for accommodations can be perceived as teachers 'not getting autism' (Anderson et al., 2024). Participants in our study may have interpreted the lack of tailored support from teachers as a failure to acknowledge the specific needs of autistic students. For example, this could include not presenting school materials in different ways or not (sufficiently) offering individual support. Additionally, the absence of autistic-friendly spaces, such as quiet areas to retreat from noise, might have been seen as a sign that teachers and secondary schools do not recognize the unique challenges autistic students face in both the Dutch and Mexican educational contexts.

Several cross-country similarities were found among Dutch and Mexican participants. For example, in both countries one factor was found that emphasized the need for more support in terms of emotion regulation. In the Mexican sample, this need for self-control was accompanied by a need for structure. One possible explanation for this, based on previous research, is that autistic individuals tend to suppress their emotions rather than employ more effective strategies, such as reframing events to mitigate their negative impact (Samson et al., 2012). Given that many classroom events evoked feelings of stress in autistic males, it is crucial for schools to provide them with emotion regulation strategies. Adopting such strategies may play a crucial role in preventing self-injurious behaviours among autistic students (Martínez-González et al., 2022). Interestingly, both Dutch and Mexican autistic students were less focused on the school and classroom organization, with the exception of Factor 2 from the Dutch participants. This may have resulted from (most) autistic participants approaching the sorting of statements with a very practical and realistic perspective, focusing on aspects that could realistically be changed in secondary schools. For instance, since the Netherlands has a high investment in education (OECD, 2021), students in Factor 2 may have believed it is feasible for Dutch secondary schools to provide an autistic-friendly environment and have access to technology (i.e., laptops or tablets). On the other hand, the Mexican school context faces more financial constraints to support students with SEN (García-Cedillo et al., 2015; Lavin et al., 2022) and has larger class sizes (OECD, 2012). Indeed, some participants noted that (Mexican) public schools were inherently noisy with large class sizes, which may explain why they ranked needs related to the school/classroom organization relatively low. In contrast, across factors A–C, needs associated to their learning, such as being given clear instructions or receiving support during difficult activities were (overall) prioritized. Notably, such needs do not necessarily require additional funding from the Mexican government, making them more feasible to address compared to purchasing technology or designating a specific space for autistic learners within the school (Lebenhagen, 2024).

One of the main cross-country differences that stood out between the need-profiles of autistic males in the Netherlands and Mexico was that Mexican autistic males had a much stronger need to feel safe in the secondary school environment. Although young people in the Netherlands between ages 15 and 17 are more likely to experience some form of bullying than older people (Statistics Netherlands, 2022), the prevalence of school bullying has remained relatively low possibly due to the country's existing Anti-bullying Law and safety monitoring programs (Inspectorate of Education, 2023; UNESCO, 2019). In contrast, reports show that the majority of Mexican students (70%) are victims of different types of bullying (Excelsior, 2019; SEP, 2014), with students enrolled in public education reporting a higher number of incidents than those in private schools (UNICEF, 2019). Although no official data on the number of Mexican autistic students who have been victims of bullying exist, research in other countries suggest that autistic learners are at higher risk of bullying victimization (Campbell et al., 2017). Given that bullying led to suicidal ideation in (at least) one autistic participant in our study, Mexican schools need to take immediate action to protect autistic students' well-being. To address safety concerns for autistic students in Mexico, an autistic peer-support program at the secondary education

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level could be a valuable strategy. Research by Crompton et al. (2023) underlines the positive impact of interactions with likeminded peers on autistic learners. Such connections seem to give autistic students not only the opportunity to discuss problems at school but also the confidence to confront them (Crompton et al., 2023). Therefore, future research could explore the effectiveness of autistic peer-support programs in mitigating bullying and fostering a safer environment for autistic students in Mexican secondary schools.

Our results indicate that there are several ways in which teachers in the Netherlands and Mexico can support autistic male adolescents who enrolled in secondary education. Indeed, the need-profiles of autistic students are quite heterogeneous but some of their most pressing needs, such as having clear and detailed instructions from teachers, can benefit all students and not only those with an ASD diagnosis (Esqueda Villegas et al., 2022). Furthermore, some of the need-profiles presented in this paper slightly align with those found among the autistic females who participated in our study. For instance, one factor in our female sample highlighted a strong need for teacher guidance and support, emphasizing the importance of having teachers available to help with challenging classroom tasks and answer questions (Esqueda Villegas et al., submitted). In addition, it is possible that the need-profiles of autistic students with other gender identities may also overlap with these findings. However, this remains to be investigated.

Implications for practice and policy

Our findings have several practical implications for schools, classrooms and policymakers in the Netherlands and Mexico aiming to improve the educational experiences of autistic students and to do justice to both their strengths and weaknesses. Notably, several of the needs identified by autistic students in our sample were not country-specific. Therefore, teachers in both countries are encouraged to demonstrate more active involvement in the learning process of autistic students. This can be achieved, for instance, through differentiated instruction, relying on the visual strengths of autistic learners and fostering environments of trust and support. Additionally, teachers should pay close attention to the socioemotional needs of autistic students, as our findings underscore that managing emotions within the educational environment is a common challenge. Besides, previous research has emphasized that socioemotional needs can be even more pressing than the academic ones for the overall development of autistic people (Saggers et al., 2019).

In the Dutch context, schools are encouraged to integrate technology and visual materials into their instructional practices to better support and respond to the needs of autistic learners. In Mexico, adopting a more tailored instructional approach, such as providing one-on-one support during complex tasks, could enhance these students learning outcomes. Yet, we acknowledge that larger class sizes in the Mexican context (OECD, 2012) can hinder the implementation of such practices. Lastly, policymakers in both countries should prioritize providing teachers (both pre-service and in-service) with opportunities to learn about the diverse needs of autistic adolescents. In this sense, it is essential that the voices of autistic students, particularly their perspectives on what is necessary for an optimal learning, inform future national and international policies aimed at advancing toward inclusive education.

Limitations and future research

Our study should be interpreted in the light of some limitations. First, in each country we had a relatively small—although not uncommon in Q-studies—sample size. While the aim of neither Q methodology or our research was to generalize findings to the population of autistic students within Mexico and the Netherlands (Lee, 2017), future research could benefit from including a larger number of participants, and other gender identities to see whether specific needs overlap and are either country or gender-bounded.

Second, the initial list of statements in our Q-study was based on the main findings from an earlier systematic review regarding the inclusive education of autistic students, which did not specifically include data from the Dutch and Mexican context (Esqueda Villegas et al., 2022). However, to ensure that our statements adequately covered their main needs, these were discussed, piloted and rephrased with the help of autistic youth from both countries. While it is still possible that our final list of statements is not exhaustive of the educational needs of all autistic students enrolled in Dutch and Mexican mainstream settings, this study is the first to explore the need-profiles of these under-represented groups. Notably, to improve the accessibility of the Q sort, we recommended that in future Q-studies, researchers consult autistic participants directly to identify necessary accommodations, such as text-to-speech devices or statements printed in larger font sizes.

A third limitation is that this Q-study had a 'forced-distribution' set up, which means that autistic participants had to make a choice between statements (Lee, 2017), even though their sorting decisions could be changed at any time in both the online and paper-versions of the study. A fourth limitation is that we included both current and former secondary education (autistic) students. Therefore, there is a possibility that the reported needs of former students reflect their current needs or differ from what they could have found

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most/least important during their actual school years. Furthermore, since there is a strong need for research focusing on the perspective of autistic adolescents (Saggers, 2015), we believe that the school experiences of former secondary education students are equally valuable.

CONCLUSION

While many studies highlight the relevance that the school and classroom organization has in the well-being of autistic students (Aubineau & Blicharska, 2020; Goodall & MacKenzie, 2019; Horgan et al., 2023; Lebenhagen & Dynia, 2024), much less attention has been paid to other needs that autistic students may have. Our findings underscore that for many autistic participants from the Netherlands and Mexico, as expressed by one autistic male, 'The place does not matter' but rather the people who constitute the secondary school environment and how these make them feel or support them. Therefore, we advise secondary education teachers to pay close attention to the needs of autistic students related to emotion regulation, sense of safety and teachers' understanding about their autism (including its implications for learning). By identifying and addressing the needs of autistic students, teachers can enhance these students' engagement at school (Brede et al., 2017) and create more positive experiences (Goodall, 2018).

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to report.

DATA AVAILABILITY STATEMENT

The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

Ethical approval was granted by the Pedagogy and Educational Sciences Ethics Review Chamber from the Faculty of Behavioural and Social Sciences of the University of Groningen.

CONSENT

Informed consent was obtained from (former and current) autistic students in both countries. An additional written informed consent from parents or a legal guardian was obtained from participants aged younger than 15 years old.

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