INCLUSIVE DIGITAL ECOSYSTEMS FOR NEURODIVERSITY: STAKEHOLDER PERSPECTIVES ON SUPPORT, TRUST, AND DIGITAL INTEGRATION

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ABSTRACT
This exploratory cross-sectional study investigated support needs, digital integration, and trust-building characteristics in neurodiversity-related contexts. An online questionnaire was completed by 268 stakeholders, primarily educators/teachers, parents/caregivers, and healthcare professionals. Families reported economic, territorial, professional, and bureaucratic barriers to accessing services. Previous use of online therapeutic services was limited (11.7%), whereas 79.6% rated an integrated digital platform positively (scores 4–6). School support was the most frequently selected priority service (58.5%). Certified professionals (67.5%) and continuous assistance (49.1%) were the leading trust-building characteristics. Findings support a person–technology–context perspective in which inclusive digital ecosystems complement human relationships while promoting accessible, coordinated, and professionally grounded support.

KEYWORDS
Neurodiversity; inclusive digital ecosystems; digital trust.

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1. Introduction

Neurodiversity has increasingly contributed to a shift from deficit-oriented interpretations of neurological differences towards perspectives that recognise heterogeneity in cognitive, sensory, communicative, and learning profiles. Within education and related support contexts, this perspective calls for environments that are responsive to individual differences and capable of promoting participation, autonomy, and meaningful inclusion. Digital technologies may contribute to this process by providing alternative modes of access, communication, learning, and personalised support, particularly when they are embedded within environments designed around users' needs rather than introduced as isolated technological solutions. Recent research highlights the importance of accessibility, user-centred design, and professional support in the development and implementation of inclusive digital technologies (Maberah & Abu Al-Rub, 2026; Sakowicz & Hamidi, 2026). Accordingly, the development of inclusive digital environments may require a balance between technological opportunities and meaningful human support. Digitalisation should not necessarily be conceptualised as the replacement of educational, therapeutic, or professional relationships, but as a potential means of connecting and supporting them. This perspective is consistent with emerging human-centred approaches to inclusive technology, which emphasise accessibility, professional agency, contextual appropriateness, user participation, and collaboration in technology implementation (Maberah & Abu Al-Rub, 2026; Sakowicz & Hamidi, 2026).

Despite the growing literature on inclusive technologies, technology acceptance, and digital accessibility, there remains a need to examine how different stakeholders perceive these dimensions within the same support ecosystem. Existing research has frequently focused on specific technologies,

professional groups, or individual contexts of use, whereas neurodiversity-related support typically involves multiple interconnected actors across educational, family, healthcare, and social settings. Examining perceived barriers to existing services alongside attitudes towards digital support may therefore contribute to a more comprehensive understanding of the conditions under which integrated digital environments can respond to heterogeneous stakeholder needs. A multi-stakeholder perspective may also help identify areas of convergence and divergence among families, educators, and healthcare professionals and clarify which characteristics are considered important for trustworthy digital support.

Against this background, the present exploratory cross-sectional study investigated the perspectives of 268 stakeholders involved in neurodiversity-related contexts. The study examined perceived barriers and unmet support needs, previous experiences with digitally mediated services, perceived usefulness and effectiveness of digital support, perceptions of integrated digital services, differences across the main stakeholder groups, and the characteristics considered important for fostering trust. Four research questions guided the study:

RQ1. What barriers and unmet needs characterize access to support and services for neurodivergent individuals according to the surveyed stakeholders?

RQ2. How do stakeholders perceive the usefulness and effectiveness of digital and integrated support for neurodiversity?

RQ3. Do perceptions and previous experiences of digital support differ across the main stakeholder groups?

RQ4. Which characteristics of an integrated digital service are considered most important for fostering stakeholder trust?

2. Methods

2.1 Study Design and Participants

An exploratory cross-sectional survey design was adopted to investigate stakeholders' perspectives on support needs, digital services, integrated digital support, and trust in neurodiversity-related contexts. The study was designed to capture perspectives from different actors involved in educational, family, healthcare, social, and professional support pathways. A total of 268 respondents completed the questionnaire. The largest stakeholder group consisted of educators and teachers (n = 164; 61.2%), followed by parents and caregivers (n = 55; 20.5%) and healthcare professionals (n = 26; 9.7%). The remaining 23 respondents (8.6%) represented other stakeholder categories, including neurodivergent individuals, organisations, peer tutors, company/HR representatives, and other self-defined profiles.

Participants represented different territorial contexts. Most respondents reported living in a medium-sized urban area (n = 153; 57.1%), followed by small municipalities (n = 76; 28.4%), metropolitan areas (n = 35; 13.1%), and rural or inner areas (n = 4; 1.5%).

For inferential analyses comparing stakeholder groups, only the three main categories explicitly defined in the original questionnaire were considered: educators/teachers, parents/caregivers, and healthcare professionals. Free-text responses that could potentially be recoded into one of these categories were not incorporated into the inferential groups in order to preserve the original classification provided by respondents.

2.2. Instrument

Data were collected through an ad hoc structured questionnaire developed to explore support needs and perceptions of digital services in neurodiversity-related contexts. The questionnaire was not intended as a psychometric instrument or as a validated measure of technology acceptance or trust. Rather, it was designed as an exploratory needs-assessment tool addressing accessibility to services, territorial and organisational barriers, perceived usefulness of digital support, integrated service provision, and characteristics potentially contributing to trust.

The questionnaire adopted a branching structure so that respondents were presented with sections relevant to their stakeholder profile. The initial section collected information on stakeholder category and territorial context. Parents and caregivers were subsequently asked about access to existing services, perceived accessibility, geographical distance, expenditure, bureaucratic burden, and unmet needs.

A second group of items explored experience with digitally mediated support. Respondents were asked whether they had previously used online therapeutic services and which potential limitations they associated with online provision, including therapeutic relationships, user engagement, perceived effectiveness, privacy and security, and digital competencies. Additional items investigated areas in which digital support could be useful and respondents' perceptions of the usefulness and effectiveness of online and digitally integrated support.

The questionnaire also examined perceptions of an integrated digital service environment, including the perceived usefulness of an integrated platform and the services considered most relevant within such an environment. Finally, respondents selected the characteristics they considered capable of increasing trust in a digital service, including certified professionals, continuous assistance, healthcare collaborations, clinical

supervision, scientific evidence, university partnerships, and user communities.

Perceptions of accessibility, bureaucratic burden, usefulness, effectiveness, and integrated digital support were assessed using six-point response scales. Multiple-response questions were used when respondents could legitimately identify more than one relevant service, concern, or trust-building characteristic. Open-ended questions were also included to allow respondents to report unmet needs and perceived barriers in their own words.

2.3. Data Management and Statistical Analysis

Data were screened and cleaned prior to analysis. The original dataset was retained separately from the cleaned analytical dataset to preserve the raw responses. Missing responses resulting from the questionnaire branching structure were treated as structurally missing and were not imputed.

Eight responses contained a value of 10 in items whose defined response range was 1–6. Because these values exceeded the maximum permitted response category, they were recoded to the upper valid category (6) before analysis. No exact duplicate response records were identified.

Categorical variables were summarised using frequencies and percentages. Multiple-response items were analysed by calculating the proportion of respondents selecting each option relative to the number of respondents who completed the corresponding question. Six-point ordinal items were primarily summarised using the median and interquartile range (IQR); means and standard deviations were additionally reported to facilitate descriptive interpretation.

Because the principal perception outcomes were measured using single ordinal response items, differences among the three main stakeholder groups were examined using the Kruskal–Wallis test rather than assuming normally distributed continuous outcomes. Group differences were examined for perceived usefulness of online support, perceived effectiveness of digital integration, and perceived usefulness of an integrated digital platform.

Associations between stakeholder group and previous experience with online therapeutic services were examined using a contingency-table approach. Given the presence of small expected frequencies in the table, a permutation-based test was used to provide a more robust assessment of statistical significance.

For the trust-building characteristics, selection frequencies were first examined descriptively for the overall sample and subsequently compared across the three main stakeholder groups. Chi-square statistics and Cramér's V were used to describe group differences and effect size. Because seven trust-building characteristics were examined, a Bonferroni-adjusted significance threshold of $\alpha = .0071$ was applied to these exploratory comparisons.

All statistical tests were two-sided. Given the exploratory nature of the study, inferential findings were interpreted alongside descriptive distributions and effect sizes rather than exclusively according to statistical significance.

2.4. Recruitment, Data Collection and Ethical Considerations

Participants were recruited through targeted dissemination of the online questionnaire among stakeholders involved in neurodiversity-related

contexts, particularly teachers, educators, Applied Behavior Analysis (ABA) therapists, and parents of neurodivergent children and adolescents. The questionnaire was available online from 20 May to 5 July 2026, and participation was voluntary.

The study was conducted as an exploratory needs-assessment survey and did not involve experimental procedures, clinical interventions, or manipulation of participants' behaviour. The study was not submitted to an institutional ethics committee for formal approval. The analytical dataset used for the present study was de-identified, and the optional email field was excluded from the analyses. Data were analysed exclusively in aggregate form for research and statistical purposes. Before completing the questionnaire, participants were informed about the purpose of the study and the intended use of the data for research and statistical purposes. Completion and submission of the questionnaire were voluntary.

3. Results

3.1. Sample Characteristics

A total of 268 respondents were included in the analysis. Based on the original questionnaire categories, educators and teachers represented the largest stakeholder group (n = 164; 61.2%), followed by parents and caregivers (n = 55; 20.5%) and healthcare professionals (n = 26; 9.7%). The remaining respondents (n = 23; 8.6%) represented other stakeholder categories, including neurodivergent individuals, peer tutors, representatives of associations and third-sector organisations, company/HR representatives, and other self-defined profiles.

With regard to territorial context, most respondents reported living in medium-sized urban areas (n = 153; 57.1%), followed by small

municipalities (n = 76; 28.4%), metropolitan areas (n = 35; 13.1%), and rural or inner areas (n = 4; 1.5%). Sample characteristics and territorial distribution are summarised in Table 1.

Table 1: Sample characteristics (n=268)

Characteristic	Category	n	%
Stakeholder group	Educators/teachers	164	61.2
	Parents/caregivers	55	20.5
	Healthcare professionals	26	9.7
	Other stakeholder categories	23	8.6
Territorial context	Medium-sized urban area	153	57.1
	Small municipality	76	28.4
	Metropolitan area	35	13.1
	Rural/inner area	4	1.5

Note. Stakeholder categories refer to the original questionnaire classification.

3.2. Access to Services and Support Needs

To address RQ1, access barriers and unmet support needs were examined among parents and caregivers who completed the family-service section. Among the 55 parents/caregivers who completed the family-service section, perceived accessibility of specialist services showed a median score of 3 on the six-point scale (IQR = 2–4; M = 3.13, SD = 1.55). Overall, 45.5% of respondents assigned an accessibility score between 4 and 6.

The most frequently reported barrier to accessing services was high cost (34.5%), followed by the absence of local services (23.6%), shortage of professionals (16.4%), and waiting lists (12.7%). Less frequently selected barriers included bureaucratic complexity (5.5%), geographical distance (3.6%), and lack of therapeutic continuity (3.6%).

Economic burden was also evident in reported expenditure: 52.7% of parents/caregivers indicated spending at least €300 per month on services, while 23.6% reported expenditure of at least €600 per month.

Bureaucratic burden showed a median score of 4 (IQR = 3–6; M = 4.25, SD = 1.59), with 70.9% of parents/caregivers assigning a score between 4 and

6. Table 2 summarises the main access indicators and barriers reported by parents/caregivers, together with the key descriptive outcomes related to digital support and integration.

Table 2: Access barriers and key digital-support outcomes

Outcome	n	Mean	SD	Median	IQR	% score ≥ 4
Accessibility of specialist services (parents/caregivers)	55	3.13	1.55	3	2–4	45.5
Bureaucratic burden (parents/caregivers)	55	4.25	1.59	4	3–6	70.9
Usefulness of online support	246	3.52	1.44	4	3–4	56.9
Perceived effectiveness of digital integration	247	3.64	1.37	4	3–5	56.3
Usefulness of an integrated digital platform	265	4.49	1.29	5	4–6	79.6

Panel B. Main access barriers among parents/caregivers (n = 55)

Barrier	n	%
High costs	19	34.5
Absence of local services	13	23.6
Shortage of professionals	9	16.4
Waiting lists	7	12.7
Bureaucratic complexity	3	5.5
Geographical distance	2	3.6
Lack of therapeutic continuity	2	3.6

3.3. Digital Support and Integrated Services

To address RQ2, respondents' previous experiences, concerns, and perceptions regarding digital support and integrated services were examined. Previous experience with online therapeutic services was relatively limited. Among the 247 respondents who completed this item, 29 (11.7%) reported previous use, whereas 218 (88.3%) reported no previous experience.

When respondents were asked about potential concerns associated with online therapeutic services, the most frequently selected issue was the therapeutic relationship (41.7%), followed by engagement of the child or young person (30.8%), perceived clinical effectiveness (25.9%), privacy and security (19.0%), and digital competencies (12.6%). Multiple responses were permitted.

At the same time, respondents identified several areas in which digital support could be useful. The most frequently selected were bureaucratic guidance (45.3%), school support (43.3%), and parent training (38.1%), followed by telemonitoring (21.1%), psychotherapy (18.6%), and ABA supervision (17.8%).

As reported in Table 2, perceived usefulness of online support hada median of 4 (IQR = 3–4; M = 3.52, SD = 1.44), with 56.9% assigning a score between 4 and 6. Perceived effectiveness of digital integration similarly showed a median of 4 (IQR = 3–5; M = 3.64, SD = 1.37), with 56.3% assigning scores between 4 and 6.

The perceived usefulness of an integrated digital platform was higher descriptively, with a median of 5 (IQR = 4–6; M = 4.49, SD = 1.29). Overall, 79.6% of respondents assigned the integrated-platform item a score between 4 and 6.

Among the services considered priorities within an integrated environment, school support was the most frequently selected option (58.5%), followed by parental psychological support (39.6%), family community support (35.1%), bureaucratic and reimbursement assistance (32.8%), company training (28.3%), and employment support (27.5%).

Table 3: Stakeholder differences in digital-support perception and previous online-service experience

Outcome	Educators/ teachers	Parents/ caregivers	Healthcare professionals	Test statistic	p
Usefulness of online support	4 (3–4)	4 (2–4)	4 (2–5)	H = 0.349	.840
Perceived effectiveness of digital integration	4 (3–5)	4 (2–5)	3 (2.25–5)	H = 1.511	.470
Usefulness of integrated digital platform	4.5 (4–5)	4 (3–6)	4 (4–5)	H = 0.330	.848
Previous use of online therapeutic services	9/164 (5.5%)	12/55 (21.8%)	7/26 (26.9%)	$\chi^2 = 17.750$	< .001*

*Note. Ordinal outcomes are reported as median (IQR). *Permutation-based test confirmed p < .001 for previous online-service experience.*

3.4. Differences Across Stakeholder Groups

To address RQ3, perceptions of digital support and previous online-service experience were compared across the three main stakeholder groups. Perceptions of digital support were compared across the three main stakeholder groups: educators/teachers, parents/caregivers, and healthcare professionals. As shown in Table 3, no statistically significant differences were observed for perceived usefulness of online support, $H(2) = 0.349$, $p = .840$; perceived effectiveness of digital integration, $H(2) = 1.511$, $p = .470$; or perceived usefulness of an integrated digital platform, $H(2) = 0.330$, $p = .848$.

A different pattern emerged for previous experience with online therapeutic services. Previous use was reported by 5.5% of educators/teachers, 21.8% of parents/caregivers, and 26.9% of healthcare professionals. A permutation-based test confirmed a statistically significant association between stakeholder group and previous online-service experience ($p < .001$). Thus, although previous exposure to online services differed across stakeholder groups, perceptions of the principal digital-support outcomes showed broadly comparable distributions.

3.5 Trust-Building Characteristics

To address RQ4, the characteristics considered most important for increasing trust in an integrated digital service were examined overall and across stakeholder groups. Among the 265 respondents who completed the trust-related section, the most frequently selected characteristic for increasing trust in an integrated digital service was the presence of certified professionals (67.5%). This was followed by continuous assistance (49.1%), collaborations with healthcare services (40.0%), clinical supervision

(35.5%), and scientific evidence supporting the services provided (34.3%). University partnerships (17.7%) and the presence of a user community (13.2%) were selected less frequently.

Exploratory comparisons across the three main stakeholder groups indicated broadly similar patterns. Continuous assistance was selected by 73.1% of healthcare professionals, compared with 48.2% of educators/teachers and 41.8% of parents/caregivers. Although this comparison reached the conventional unadjusted threshold ($p = .027$), it did not remain statistically significant after correction for seven multiple comparisons (Bonferroni-adjusted $\alpha = .0071$). No other trust-building characteristic showed statistically significant differences across stakeholder groups after correction. Overall and stakeholder-specific distributions of the trust-building characteristics are presented in Table 4.

Table 4: Trust-building characteristics overall and by stakeholder group

Trust-building feature	Overall n (%)	Educators/ teachers	Parents/ caregivers	Healthcare professionals	χ^2	p	Cramér's V
Certified professionals	179 (67.5%)	115/164 (70.1%)	33/55 (60.0%)	14/26 (53.8%)	3.841	.1466	.125
Continuous assistance	130 (49.1%)	79/164 (48.2%)	23/55 (41.8%)	19/26 (73.1%)	7.195	.0274	.171
Healthcare collaborations	106 (40.0%)	69/164 (42.1%)	21/55 (38.2%)	11/26 (42.3%)	.271	.8731	.033
Clinical supervision	94 (35.5%)	58/164 (35.4%)	16/55 (29.1%)	11/26 (42.3%)	1.460	.4819	.077
Scientific evidence	91 (34.3%)	56/164 (34.1%)	15/55 (27.3%)	13/26 (50.0%)	4.052	.1319	.129
University partnerships	47 (17.7%)	30/164 (18.3%)	12/55 (21.8%)	4/26 (15.4%)	.555	.7577	.048
User community	35 (13.2%)	18/164 (11.0%)	7/55 (12.7%)	4/26 (15.4%)	.472	.7898	.044

4. Discussion

4.1. From Support Needs to Inclusive Digital Opportunities

The present study explored how different stakeholders involved in neurodiversity-related contexts perceive existing support needs, digital services, integrated digital support, and the characteristics that may

contribute to trust. With regard to RQ1, the findings reveal a support landscape characterised by multiple barriers to access, particularly among parents and caregivers Overall, the findings depict a support landscape in which barriers to access coexist with a substantial openness towards digitally integrated forms of support. Importantly, however, this openness does not appear to imply an expectation that technology should replace existing educational, therapeutic, or professional relationships. Rather, the results point towards a model in which digital resources may complement and connect human, educational, and professional support.

Among parents and caregivers, access to specialist services was characterised by multiple challenges. High costs represented the most frequently reported barrier (34.5%), followed by the absence of local services (23.6%), shortage of professionals (16.4%), and waiting lists (12.7%). The economic dimension was particularly relevant, as more than half of parents and caregivers reported monthly expenditure of at least €300, while almost one quarter reported expenditure of €600 or more. Bureaucratic burden was also substantial, with 70.9% assigning a score between 4 and 6 on the six-point scale.

These findings suggest that accessibility cannot be reduced to the physical availability of a service. In neurodiversity-related support systems, access may be shaped by the interaction of economic, geographical, organisational, and professional factors. This broader interpretation is consistent with research showing that the adoption and implementation of assistive and inclusive technologies depend on contextual and organisational conditions alongside individual characteristics (Cheng et al., 2026; Opoku et al., 2023). It also reinforces the importance of considering digital inclusion within the broader environments in which neurodivergent individuals, families, and professionals operate.

A particularly relevant finding from an educational perspective concerns the services that respondents considered most important within an integrated digital environment. School support was the most frequently selected priority (58.5%), exceeding family community support, bureaucratic assistance, employment support, and digitally delivered therapeutic services. This result positions educational support at the centre of stakeholders' expectations regarding integrated digital services and suggests that the potential value of digital ecosystems for neurodiversity extends beyond clinical or therapeutic provision.

4.2. Digital Integration Without Replacing Human Relationships

In relation to RQ2, the findings indicate a generally favourable perception of digitally integrated support, alongside important concerns regarding relational aspects of online service provision. Previous direct experience with online therapeutic services was limited: only 11.7% of respondents reported having used them. Nevertheless, perceptions of digital support were not predominantly negative. More than half of respondents assigned scores between 4 and 6 to both the usefulness of online support (56.9%) and the perceived effectiveness of digital integration (56.3%).

Most notably, the perceived usefulness of an integrated digital platform reached a median of 5 (IQR = 4–6), with 79.6% of respondents assigning scores between 4 and 6. This finding should be interpreted cautiously because the questionnaire did not experimentally compare different service models. However, descriptively, it suggests that respondents may distinguish between individual online services and a more integrated digital environment capable of connecting different forms of support.

This distinction is particularly meaningful when considered alongside respondents' concerns regarding online therapeutic services. The therapeutic relationship was the most frequently identified concern (41.7%), followed by engagement of the child or young person (30.8%). Privacy and security, although relevant, were selected less frequently (19.0%). Thus, the principal concerns expressed by respondents were not exclusively technological; they were also relational.

This finding resonates strongly with the human-centred perspective emerging in research on technology-mediated support for neurodiversity. Studies involving caregivers and professionals have highlighted that implementation depends not only on technological functionality but also on human factors, professional practices, accessibility, and the characteristics of the surrounding support environment (Alharbi, 2026; Sakowicz & Hamidi, 2026).

The combination of relatively high perceived usefulness of integrated digital support and concern for the therapeutic relationship therefore suggests an important distinction: stakeholders appear open to digital mediation, but not necessarily to the substitution of human relationships by digital technologies. From an inclusive perspective, technology may be most valuable when it operates as an enabling infrastructure connecting people, services, educational environments, and professional expertise.

4.3. Different Experiences, Converging Perceptions

Regarding RQ3, the findings reveal an important distinction between previous experience and perceptions of digital support. An additional finding concerns the relationship between stakeholder background and perceptions of digital support. Educators and teachers, parents and

caregivers, and healthcare professionals differed substantially in their previous experience with online therapeutic services. Previous use was reported by 5.5% of educators and teachers, compared with 21.8% of parents and caregivers and 26.9% of healthcare professionals, with the permutation-based analysis confirming a significant association between stakeholder group and previous online-service experience ($p < .001$).

Despite these differences in previous exposure, no statistically significant differences emerged among the three stakeholder groups in perceived usefulness of online support, perceived effectiveness of digital integration, or perceived usefulness of an integrated digital platform.

This convergence is noteworthy. It suggests that different levels of previous experience with online services did not translate into clearly different evaluations of the principal digital-support outcomes measured in the study. Although the cross-sectional design does not allow causal interpretations, the finding indicates that perceived value of integrated digital support may extend across stakeholder groups occupying different positions within neurodiversity-related support pathways.

This result also supports the relevance of a multi-stakeholder perspective. Rather than designing digital environments exclusively around the needs of a single professional or user group, inclusive digital services may need to accommodate the interaction of educational, family, healthcare, and community perspectives.

4.4. Trust as a Property of the Support Ecosystem

Finally, in relation to RQ4, trust-building preferences emphasised the human and institutional infrastructure surrounding digital services. The trust-related findings further reinforce this interpretation. The

characteristic most frequently identified as capable of increasing trust was the presence of certified professionals (67.5%), followed by continuous assistance (49.1%), collaborations with healthcare services (40.0%), clinical supervision (35.5%), and scientific evidence (34.3%).

Trust, therefore, was not represented primarily through technological characteristics alone. Respondents placed considerable emphasis on the human and institutional infrastructure surrounding the technology.

This pattern is consistent with emerging research suggesting that trust can contribute to engagement with digitally mediated systems, including among neurodivergent users (Tippavajjula et al., 2026). At the same time, the present study broadens the perspective by showing that stakeholders associate trust-building not only with the digital system itself, but also with professional qualifications, continuity of assistance, clinical oversight, healthcare collaboration, and scientific grounding.

Exploratory comparisons indicated some descriptive differences between stakeholder groups—for example, continuous assistance was selected particularly frequently by healthcare professionals—but no trust-building characteristic remained statistically significant after correction for multiple comparisons. The overall pattern therefore suggests greater convergence than divergence among the three principal stakeholder groups.

4.5. Implications for Inclusive Digital Ecosystems

The findings of this study have implications for the design of inclusive digital ecosystems addressing neurodiversity-related support. First, the results suggest that digital innovation should not be approached primarily as the transfer of existing services to an online environment. Respondents identified needs that cut across educational, family, therapeutic,

organisational, and administrative domains, indicating the potential value of digital environments capable of connecting different forms of support rather than reproducing their fragmentation.

The prominence of school support, selected by 58.5% of respondents as a priority service, is particularly relevant. It suggests that educational support should occupy a central position within inclusive digital ecosystems. Such environments could facilitate communication and continuity among families, educators, and professionals while supporting access to information, guidance, and educational resources. This interpretation is consistent with studies showing that successful implementation of inclusive technologies is influenced by the interaction between individual needs, professional practices, accessibility, and contextual conditions (Cheng et al., 2026; Opoku et al., 2023; Sakowicz & Hamidi, 2026).

Second, the results highlight the importance of human oversight and professional credibility. Certified professionals were the most frequently selected trust-building characteristic, followed by continuous assistance, healthcare collaborations, clinical supervision, and scientific evidence. These findings suggest that technological functionality alone may not be sufficient to establish confidence in digitally mediated support. Instead, users may evaluate the broader system through which technology is delivered, including the competence of the professionals involved, the continuity of support, and the presence of institutional and scientific safeguards.

This perspective is compatible with human-centred approaches to digital support, in which technology is designed around users, relationships, accessibility, and contextual needs rather than treated as an autonomous solution (Alharbi, 2026; Maberah & Abu Al-Rub, 2026). In neurodiversity-related contexts, such an approach is particularly important because

individuals may interact simultaneously with educational, family, healthcare, and community systems.

Taken together, the findings support a person–technology–context perspective on inclusive digitalisation. From this perspective, the value of an inclusive digital ecosystem lies not simply in the number of digital services it provides, but in its capacity to make support more accessible, coordinated, understandable, and responsive while preserving meaningful human relationships.

4.6. Limitations and Future Research

Several limitations should be considered when interpreting the findings. First, the study adopted an exploratory cross-sectional survey design and a non-probabilistic recruitment strategy. The sample should therefore not be considered representative of the broader population of stakeholders involved in neurodiversity-related services.

Second, educators and teachers constituted the largest stakeholder group, representing 61.2% of the sample. Although this distribution provides substantial insight into the educational dimension of neurodiversity support, it also limits direct comparisons with smaller stakeholder groups. Inferential analyses were therefore restricted to the three largest original questionnaire categories, and results should be interpreted as exploratory.

Third, the questionnaire was developed as an ad hoc needs-assessment instrument rather than as a validated psychometric scale. The six-point items assessing accessibility, bureaucratic burden, usefulness, and effectiveness represent individual perceptions and should not be interpreted as latent psychological constructs. Similarly, the trust-related question identified characteristics that respondents considered capable of

increasing trust and should not be interpreted as a validated measure of digital trust.

Fourth, the branching structure of the questionnaire resulted in different denominators across sections. Missing responses generated by this structure were considered structural and were not imputed. Multiple-response items also allowed respondents to select more than one option; consequently, percentages for these questions are not mutually exclusive.

Finally, the cross-sectional design does not permit causal conclusions regarding the relationship between previous digital experience, perceived usefulness, trust-related characteristics, and future adoption. Future research should extend these findings using more balanced stakeholder samples, direct participation of larger groups of neurodivergent individuals, and longitudinal or mixed-method designs. Qualitative investigation may also help clarify how stakeholders conceptualise relational quality, professional credibility, accessibility, and trust in digitally mediated support.

Future studies could additionally develop and psychometrically evaluate multi-item measures addressing these dimensions and examine their relationships with actual adoption and continued use. Such research would allow the exploratory patterns identified in the present study to be tested within more comprehensive models of inclusive digital engagement.

5. Conclusions

This study provides a multi-stakeholder perspective on support needs, digital integration, and trust-building characteristics in neurodiversity-related contexts. The findings indicate that families continue to encounter economic, territorial, professional, and bureaucratic barriers to accessing

support, while stakeholders simultaneously recognise potential value in digitally mediated and integrated services.

The results also reveal an important distinction between digitalisation and integration. Previous experience with online therapeutic services was limited, and respondents expressed concerns particularly regarding the therapeutic relationship and engagement of children and young people. Nevertheless, the perceived usefulness of an integrated digital platform was high, with 79.6% of respondents assigning scores between 4 and 6. This pattern suggests that stakeholders may be receptive to digital environments when technology is conceived as a means of connecting and supporting services rather than replacing human relationships.

The educational dimension emerged prominently, with school support representing the most frequently selected priority within an integrated digital environment. Furthermore, trust-building preferences emphasised certified professionals, continuous assistance, healthcare collaboration, clinical supervision, and scientific evidence. These findings position professional and relational dimensions alongside technological accessibility in the development of inclusive digital support.

Overall, inclusive digital ecosystems for neurodiversity may be most meaningful when designed around the interaction between people, technology, and context. Digital innovation should therefore aim not only to expand access to services, but also to strengthen coordination, professional credibility, educational continuity, accessibility, and meaningful human relationships.

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