Shifting Focus From Impairment to Inclusion: Expanding Occupational Therapy for Neurodivergent Students to Address School Environments

Yu-Lun Chen, Kristie Patten

Social participation in schools is critical to student academic and psychosocial outcomes. Neurodivergent students, however, often experience environmental barriers to social participation, such as lack of awareness and negative attitudes among peers and school staff, including teachers. Although authentic social participation is composed of dynamic interactions between a person and the external environments, occupational therapy’s role in addressing student social participation primarily focuses on internal social characteristics. Barriers within school environments often remain unaddressed, with no clear role for occupational therapy practitioners. We advocate an expansion of occupational therapy’s role to address school environments, especially the social, physical, and policy aspects, to promote social participation and inclusion. We also discuss the need for change and present a framework guiding intervention in school environments.

Current occupational therapy practice addressing the social participation of neurodivergent students in schools emphasizes client factors over external environments (Leigers et al., 2016), an orientation that reflects the medical model of disability. The medical model focuses on the remediation of individual pathology and has been criticized for overlooking the effects of social contexts on one’s ability to participate in society. Alternatively, the social model interprets disability as a product of restrictive physical, attitudinal, and sociopolitical environments, and it highlights the removal of contextual barriers instead of the remediation of individual deficits (Oliver, 1996; Shakespeare, 2013).

In line with the social model, the neurodiversity paradigm considers neurodivergence (i.e., neurocognitive differences such as autism, attention deficit hyperactivity disorder [ADHD], and intellectual disability) as natural human variations instead of pathology and regards disability experienced by neurodivergent people as resulting from social contexts that fail to support individual differences (den Houting, 2019; Hughes, 2016; Kapp, 2019). In light of this perspective, addressing barriers within school environments is pertinent to support student participation (Richardson, 2002).

In this column, we discuss how a shift of focus from individual deficits to environmental and other contextual barriers is necessary and beneficial in school-based occupational therapy. Specifically, we draw most examples from studies of social participation among autistic students1 because of the vast amount of related research.

Social Participation in Inclusive Education

In line with progress in inclusive practices, more and more students with disabilities are learning in general education classes (National Council on Disability, 2018); yet, many of them are only physically, not socially, included. Students with disabilities often struggle with the peer interactions, relationships, acceptance by peers, and self-perception of

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1In this column, we purposely use identity-first language (e.g., autistic student) instead of people-first language (e.g., students with autism) because it is preferred by a large percentage of autistic people and family members, who deem autism as an immutable part of their self-identity (Kenny et al., 2016).

interaction and belonging that create successful social participation in schools (Bossaert et al., 2013). They are commonly rejected and isolated by peers and have fewer and less supportive friendships (Coster et al., 2013; Locke et al., 2010; Raghavendra et al., 2012).

Without peer support, these students consistently experience significantly higher rates of bullying than typically developing peers (Rose & Gage, 2016). Poor social relations are also associated with a lower sense of belonging in school, which is critical for marginalized students and affects academic outcomes and school engagement (Booker, 2006; McMahon et al., 2008; Rose et al., 2015). Given the crucial impact of social participation on school engagement and psychosocial and physical well-being (Helseth & Misvaer, 2010; Holt-Lunstad et al., 2010), it is urgent that occupational therapy practitioners comprehensively address barriers to social participation and inclusion.

**Current Practice: A Focus on Individual Impairment**

Research on and intervention for social participation among neurodivergent students have been largely shaped by the medical model, which exclusively associates the challenge of participation with individual impairment (e.g., lack of social skills accepted by the social norm). A study of school occupational therapy to address the social participation of students with disabilities revealed that current practice mainly targets client internal factors and rarely intervenes with social environments (e.g., addressing peer attitudes and advocating for changes in policy and procedures that promote participation; Leigers et al., 2016). This emphasis on individual factors is particularly strong in occupational therapy for the social participation of autistic students, in which assessments and intervention models generally focus on students’ social skills and behaviors (Tomchek & Koenig, 2016).

In contrast to the abundant literature on assessments and interventions to address the social skills of autistic students, research on the environmental barriers to social participation is sparse. Currently, no systematic framework exists for assessing and intervening in school social environments. This lack of research prevents a comprehensive understanding of the problem and holistic support for students. This impairment-focused approach is insufficient for at least two reasons, which are described in the sections that follow.

**From Individual to Environment**

First, the individual-focused approach gives insufficient attention to environmental barriers to a student’s social participation. From the social model perspective, disability resides in restrictive environments and sociocultural contexts rather than within a person (Oliver, 1996); thus, the focus of occupational therapy practice must expand to include external barriers. From the perspective of ecological occupational therapy models, social participation, as with other forms of occupational performance, results from the interrelationships between students and their school environments within the broader social, political, and attitudinal contexts (Dunn et al., 1994; Law et al., 1996).

Barriers to social participation involve not only client factors (e.g., student behavioral traits and social skills) but also environmental and other contextual factors, including attitudes of peers, teachers, and school staff; teacher awareness of students’ social needs and intervention strategies; and school practices and policies regarding inclusion (Anaby et al., 2013; Chang et al., 2016; de Boer et al., 2012). The individual-focused approach oversimplifies the misfit between student individual challenges and environmental barriers as individual impairments, potentially compromising a practitioner’s awareness of environmental barriers. This culture of practice can shape a practitioner’s interpretation of neurodivergent students’ social participation challenges and, in turn, jeopardize evaluation and intervention that holistically account for environmental barriers.
From Impairment to Difference

Second, the individual-focused approach assumes that neurodivergent differences (e.g., lack of eye contact or atypical verbal communication) are impairments to be amended to conform to normative standards. This deficit-based approach only allows for a negative interpretation of atypical individual characteristics and may reinforce negative attitudes toward neurodivergent people. Most important, intervention and research focusing on normalizing neurodivergent characteristics can lead to stigmatization, otherness, and a sense of deficiency (Gillespie-Lynch et al., 2017; Milton & Sims, 2016). Many neurodivergent people have reported experiencing psychological distress when effortfully conforming to normative expectations (Hull et al., 2017; Lai et al., 2017; Milton & Sims, 2016).

An alternative understanding of the neurodiversity perspective promotes a reconceptualization of autism and other neurocognitive conditions (e.g., ADHD, intellectual disability, dyslexia) through the lens of human diversity (Fenton & Krahn, 2007; Robertson, 2009). Supported by a large proportion of autistic self-advocates and their families, the neurodiversity movement calls for recognition of neurocognitive conditions as a diversity of human minds that is to be accepted, valued, and included in the neurotypical society (Baker, 2006; Blume, 1997; Fenton & Krahn, 2007; Kenny et al., 2016; Sinclair, 2010; Singer, 1999). Thus, a more inclusive intervention approach is to shift attention from individual challenges to the external barriers and to create a supportive environment that promotes participation.

For example, predominant interventions for autistic students interpret atypical social behaviors (e.g., lack of eye contact or verbal language) as social impairments and aim to build normative social skills equivalent to those of typically developing peers (Tomchek & Koenig, 2016; Vidal et al., 2018). However, research has suggested that eye contact can be a stressful experience for autistic people, one that is associated with sensory overload, feelings of invasion, and adverse emotional and physiological reactions; these responses, in turn, challenge their social communication (Trevisan et al., 2017).

Therefore, avoidance of eye contact is a compensating strategy for autistic people to concentrate on processing other social information during interactions. Instead of interpreting avoidance of eye contact as a deficit, as in the individual-focused approach, expanding the focus to include the social environments enables a holistic understanding that the barrier to participation also exists in the neurotypical society that fails to understand the communication style of autistic people. As such, the challenge of social participation of a neurodivergent student with neurotypical peers resides in the mismatch between the student and their social environments rather than in individual impairments.

Paradigm Shift From Impairment to Inclusion

In light of the limitations of impairment-oriented practice, we advocate the expansion of occupational therapy practice addressing social participation in school from student internal challenges to environmental barriers, including attitudes of peers, teachers, and school staff; teacher awareness of students’ social needs and intervention strategies; and school practices and policies regarding inclusion. With knowledge of person–environment relationships and skills of environment evaluation and modification, occupational therapy practitioners are well positioned to address environmental barriers and advocate for better inclusion practice.

A prerequisite to the change, however, is a shift in attitudes among practitioners and researchers to recognize disability as a misfit between a person and the environment and to regard differences as diversity rather than impairment. This expansion can enable more comprehensive service, promote true inclusion, and advance the value of the profession. The sections that follow discuss the theoretical and legal foundations for school-based occupational therapy to address environmental barriers to social participation.
Environmental Factors in Student Social Participation

Two critical aspects of school environments affecting student social participation are overlooked in current practice: (1) the social environment of the client and (2) school policies and procedures on social inclusion. Addressing these aspects is a first step in expanding the focus of occupational therapy to improve social participation.

Social Environment

Social environments include peers, teachers, and school staff (e.g., paraprofessionals or administrators); their awareness of disability; and attitudes and acceptance or rejection toward neurodivergent students. Peer rejection and negative peer attitudes toward neurodivergent students are commonly observed, especially for students with behavioral or intellectual difficulties (de Boer et al., 2012). For example, research has found that students with ADHD and autistic students are more likely to be rejected by peers than are neurotypical students (de Boer & Pijl, 2016). Moreover, neurotypical peers develop negative attitudes on their first impression of an autistic student, which mainly stem from their bias toward autistic styles of social presentation (e.g., facial expression) rather than the content of the conversation (Sasson et al., 2017).

Better understanding of disability is associated with more positive peer attitudes (de Boer & Pijl, 2016; Leigers & Myers, 2015). Peer bias and attitudes are critical but malleable barriers to participation that can be improved by peer-awareness education. As the field of occupational therapy aims to enable participation by modifying environmental barriers, these barriers must be addressed in any comprehensive evaluation and intervention plan.

Policies and Procedures

The social inclusion approach, a school inclusion practice well supported by research, demands that school policies and procedures support the social participation of students with disabilities and provide opportunities to connect with diverse peers to the fullest extent, such as providing accessible extracurricular activities (McMahon et al., 2016). However, barriers such as lack of professional training and special education resources have been reported to hinder student participation (Cook et al., 2016). Occupational therapy practitioners should advocate for school practices and resources that support student participation through individual, group, and classroom levels of environmental intervention (Table 1).

Table 1. Environmental Intervention According to the Response to Intervention Model

<table>
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<tr>
<th>Tier</th>
<th>Level of Intervention</th>
<th>Examples of Interventions</th>
<th>Examples of Activities</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Classroom instruction</td>
<td>• Examine environmental barriers in classrooms and advocate for changes.</td>
<td>• For examples of peer-awareness programs, see de Boer et al. (2014) and Ison et al. (2010). For a review of the elements of effective peer-awareness programs, see Leigers and Myers (2015).</td>
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<td></td>
<td></td>
<td>• Provide peer-awareness education for all students in collaboration with teachers and administrators.</td>
<td>• Discuss with teachers their observations of the client’s social participation and share strategies to provide social support.</td>
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<td></td>
<td></td>
<td>• Advocate for teacher education on strategies to support neurodivergent students.</td>
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<td></td>
<td></td>
<td>• Propose class activities incorporating the client’s interests to promote shared engagement.</td>
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<tr>
<td>2</td>
<td>Targeted small group instruction</td>
<td>• Propose activity-based social groups for students with shared interests to participate in together in a supportive context.</td>
<td>• Example activity-based groups: LEGO® playgroup, interest-based school clubs</td>
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<td></td>
<td></td>
<td>• Advocate for peer-support groups of neurodivergent students.</td>
<td>• Example activities for peer-support groups: Engage in shared interests; discuss the social experience, likes, dislikes, and strategies for self-advocacy.</td>
</tr>
<tr>
<td>3</td>
<td>Intensive individual intervention</td>
<td>• Provide strength-based individual intervention for students with profound challenges of social participation.</td>
<td>• Discuss with the client their social strengths, challenges, and interests.</td>
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Directions to Action  
In-Depth Evaluation of the School Social Environment

To comprehensively understand clients’ participation challenges, practitioners must systemically evaluate each student’s school environment. With a shift of focus from individual deficits toward the environment, practitioners can evaluate supports and barriers in school environments through observation of school and classroom practices and interviews with students, teachers, peers, parents, and school staff. Practitioners can also use assessments of school environments. For example, the Child and Adolescent Social Support Scale (Malecki & Demary, 2002) measures students’ perceived social support from parents, teachers, and peers and can be used or adapted for specific school settings. Future research to develop a comprehensive assessment of school environments is needed.

Interventions in School Environments

The Individuals With Disabilities Education Improvement Act of 2004 (IDEA; Pub. L. 108-446) expanded school occupational therapy from direct services for students with special education needs to developmental, corrective, and other supportive services required for a student to benefit from special education (American Occupational Therapy Association, 2012). Therefore, practitioners are legitimately able to intervene in school environments and advocate for policy and procedures that promote social inclusion. In addition, IDEA allows occupational therapy practitioners to act as providers of early intervention services for students in general education who do not receive special education or related services. Thus, occupational therapy practitioners can offer strategies and interventions under the Response to Intervention (RtI) model. Table 1 presents examples of interventions that practitioners may use to address environmental barriers in schools according to the RtI model.

Conclusion

Following the trend of inclusion and contemporary conceptualization of disabilities, it is urgent to extend current individual-focused school practice to address the barriers to social participation present in school environments. The first step is to shift practitioners’ and researchers’ attitudes so that atypical individual characteristics are seen as differences to be supported rather than impairments to be remediated. With a positive attitude toward neurodivergent differences, occupational therapy practitioners can address environmental barriers hindering neurodivergent students’ participation and advocate for equity and social inclusion. Occupational therapy practitioners are capable of measuring and addressing school environments, although tools for the evaluation of school environments and more research to identify the impact of school environments on student participation are needed. For now, the RtI model offers promise for environmental intervention. It is our hope that this column will spark a dialogue on occupational therapy’s role in facilitating social inclusion as well as on practice and research on school environments.

References

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