

PERSPECTIVES IN REHABILITATION

Conceptualizing participation in context for children and youth with disabilities: an activity setting perspective

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Abstract

This article considers the conceptualization, operationalization and implications of “activity settings” for research on the recreation and leisure participation of children and youth with disabilities. Activity settings are contextualized settings that situate child and youth activities and their participation experiences. We discuss activity settings as an important construct for considering environmental qualities that provide opportunities for beneficial participation experiences for children and youth with disabilities. The article considers existing research using the concept of activity settings, the conceptualization of environment and contemporary issues in the measurement of participation and environment, indicating how these are addressed by an activity settings approach. We then describe the development of two quantitative measures of recreation and leisure activity settings – one assessing environmental qualities and the other assessing youth experiences – that have the potential to inform researchers, managers and clinicians about relationships between environmental qualities and participation experiences. Finally, we consider the implications of an activity settings approach for research, theory building and clinical practice.

Keywords

Activity setting, childhood disability, environment, environmental qualities, experience, participation

History

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► Implications for Rehabilitation

- An activity setting perspective can enhance understanding of the recreation and leisure participation of children and youth with disabilities.
- The Measure of Environmental Qualities of Activity Settings (MEQAS) and Self-reported Experiences of Activity Settings (SEAS) provide unique assessments of environmental qualities and experiences from an activity setting perspective.
- Clinicians might use the SEAS alone to understand particular youth experiences in certain types of settings, which may be limiting or facilitating development.
- The combined use of the SEAS and MEQAS can provide experiential profiles linked to activity setting qualities such as structure, type of activity and social partners, providing a valuable source of information about youth programs.

Life situations are an essential aspect of participation according to the International Classification of Functioning, Disability, and Rehabilitation [1]. Activity settings are a type of life situation and an important context for development across the lifespan, including the development of youth [2]. We propose that activity settings are a particularly useful construct for the field of pediatric rehabilitation, with important implications for understanding participation experiences and for the design of environmental settings to enhance the likelihood of activity engagement (i.e. physical, cognitive, and psychological involvement with an activity), as well as particular types of growth-enhancing experiences.

Activity settings for children and youth refer to particular places in which they “do things”, including active pursuits

(doing artwork, visiting others, taking part in physical activities and doing chores) and more passive activities (reading and watching television). An activity setting is a conceptual unit of analysis encompassing both subjective experience and the objective perception of observable features and the prediction of common experiences that could arise from engaging in an activity occurring at a particular time and place [3–5]. Environmental qualities therefore refer to the external features of activity settings, including their aesthetic, physical and social characteristics, and the opportunities they provide for participation, activity engagement, and growth and development [6–8].

We take the view that optimal participation experiences involve the dynamic interaction of determinants (attributes of the child/youth and activity settings) and meaningful activity engagement [9]. Engagement is a multifaceted construct comprised of affective, cognitive and behavioral aspects [10–12], which is considered to be a critical mediating factor in development [13], and also to underlie positive outcomes

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resulting from activity participation [14]. The cognitive or psychological aspects of engagement are considered to be analogous to the state of flow [15,16]. Interesting activities, people and objects lead to opportunities for children and youth to “become engaged, develop new competencies and strengthen their sense of mastery” [17]. Longer-term developmental benefits resulting from these in-the-moment experiences include competency-related benefits (i.e. skill development, physical benefits); social benefits; and psychological and emotional benefits (i.e. enhanced self-efficacy and self-confidence, heightened self-worth and heightened sense of identity/self-concept) [18].

“Activity settings” provide a bridge between environmental qualities and individuals’ experiences of participation, as they provide opportunities for development-sensitive interactions to occur [19]. There is a widespread assumption, but very little actual evidence, that certain environments enhance the likelihood of particular youth outcomes. For example, organized, adult-led activity settings have been found to lead to feelings of psychological engagement (i.e. concentrated effort, enjoyment and interest) [15] but the actual qualities of these settings have not been measured. Activity settings provide a measureable context, allowing the empirical demonstration of links between environmental qualities and participation experiences. The aim of this article is to examine the utility of an activity setting perspective for youth recreation and leisure participation, and to introduce measures by which to assess person–environment interaction.

The concept of activity setting reflects the view that the lives of individuals are composed of varied contexts that influence development [15,20]. In occupational therapy, there is a common view of activity as situated within specific contexts [21,22] and there has been a long-standing interest in understanding the influence of person, environment and occupation (i.e. task or activity) on lived experiences [23]. The notion of activity setting is ideally suited to this latter pursuit.

In rehabilitation more generally, there has been a focus on environment and life participation rather than on more specific contexts and experiences [24]. Whereas the World Health Organization defines participation as the nature and extent of a person’s involvement in life situations [1], we take an activity settings perspective and view participation as comprised of affective, cognitive and behavioral engagement in activity settings – one type of life situation. Adopting activity settings as a conceptual unit of analysis will allow a nuanced and productive look at how the qualities of contextualized settings foster certain types of positive experiences. The notion of “activity setting” therefore meets an important need in the field of pediatric rehabilitation for the identification of measureable units of the environment. The concept of “activity setting” can also help researchers and clinicians to study and understand objective and subjective perspectives on participation. We believe the construct will be useful for the design of optimal activity settings for children and youth, those that promote physical, cognitive and psychological engagement in activity, thereby optimizing the likelihood of particular social, autonomy-related and skill development experiences that are associated with longer-term developmental benefits [25].

Article objective

The intent of this article is to consider the conceptualization, operationalization and implications of “activity settings” for research on the recreation and leisure participation of children and youth with disabilities. We discuss the concept of activity settings and existing research, the conceptualization of environment and contemporary issues in the measurement of participation and environment, indicating how these are addressed by an activity

settings approach. On a more practical level, we then describe the development of two quantitative measures of recreation and leisure activity settings – one assessing environmental qualities and the other assessing youth experiences. Finally, we consider the implications of an activity settings approach for research, theory building and clinical practice.

The concept of activity settings

The concept of activity setting has a long history. Conceptual parents of the construct include Roger Barker, John and Beatrice Whiting and Urie Bronfenbrenner [19]. Activity settings have been discussed in social, community and ecological psychology [19]; special education [26]; early intervention [27]; youth development [15] and, more recently, pediatric rehabilitation [28]. There has been long-standing interest in the power of social and behavioral settings to elicit and support common behaviors [29,30].

In line with current conceptualizations of sociophysical environments and critical social science perspectives [31], activity settings are seen as the arena in which people and environments shape and define one another through multiple co-occurring and interacting influences. Activity settings are the architecture of everyday life; they are the conduits by which social and cultural institutions affect experiences and development [19,32]. Activity setting experiences encompass responses, perceptions and evaluations that are setting-specific, whereas the notion of “quality of life” typically refers to psychological and social experiences across settings, which provide an overall sense of well-being [7]. Examples of activity settings are playing ping pong at a community center, reading a book in a bookstore and playing piano in the living room.

Activity settings encompass a micro level analysis of both objective environmental qualities and subjective experiences, and are therefore different from environment and place [18] and from microsystems and behavior settings [30,33]. Since microsystems refer to patterns of activities, social roles and interpersonal *experiences* that arise from interactions between the individual and his/her immediate surroundings over time [34], activity settings differ from microsystems in that they include the objective reality of a specific time and place [33]. Activity settings differ from “situations” [35] in the emphasis of activity; situations are more passive in nature. Behavior settings refer to an eco-behavioral context consisting of a standing pattern of behavior and milieu [36], with a focus on behavior rather than activity [37].

There are differences in how activity settings have been conceptualized with respect to a focus on purpose versus experience and consideration of ecological/cultural versus interactional and psychological features [3,19]; however, activity settings have common features. These include an ecological viewpoint, a micro level of analysis and a transactional view of participation experiences. An ecological viewpoint provides a framework for understanding people in context and the nature of context itself [29,38]. A micro level of analysis deals with immediate situations or microsettings [39], and a transactional model views human activity in context, with context providing purpose, resources and constraints to the activity [33]. Activity settings not only create a slot for interaction to occur, but often define a purpose for the activity and thereby script the interaction [19].

Existing research on activity settings

Various studies have used an activity setting interpretive frame. For example, early intervention research has indicated the importance of activity settings that provide natural opportunities for children to learn social roles, cultural goals and values, and

socially adaptive skills [32,40,41]. Studies in community psychology have examined how parents design or construct activity settings to bring about particular benefits for their children, such as physical and language development [19,42]. The notion of the activity setting is considered to be the basic unit of analysis for community psychology [43]; the focal questions have included how to characterize these contexts and their effects on individuals [44]. In the educational literature, the notion of activity setting has been used as a template for data collection and interpretation of the construct of school engagement [45].

The youth development literature, which concerns typically developing youth, has focused on the benefits of one type of activity setting – organized youth programs – as a context for positive youth development [2]. For example, Shernoff and Vandell [15] used the experience sampling method to examine students' reports of quality of experience in sports and arts enrichment activities in after-school programs; Duerden et al. [46] described structured recreation activities as having certain effects due to the provision of opportunities for exploration and commitment; and Bartko and Eccles [47] examined youth experiences of organized, adult-led versus passive leisure activity settings. None of these studies directly assessed the nature of the qualities of these activity settings. According to Eccles [2], few studies outside the field of sports psychology have directly measured characteristics of activity settings, making it difficult to know which aspects of the activity setting are responsible for engagement, other positive participation experiences and developmental changes in participants.

Although studies in early intervention, education and psychology have adopted an activity setting perspective, few studies in pediatric rehabilitation have done so. There is therefore limited understanding of relationships between the presence of environmental qualities and self-reported participation experiences [48]. Little has been scientifically demonstrated regarding the contribution of the environment to participation restriction or facilitation [24].

Issues in the conceptualization of environment

Here, we review how the environment has been conceptualized in the literature, indicating how activity settings have utility as an entity unifying environmental qualities and experiences.

“Environment” as a broad and diffuse construct

The term “environment” is used inconsistently in the literature but most often refers to physical, socio-cultural, institutional or political factors affecting the individual. The notion of environment includes movement between settings; conveys a broad geographical, architectural or social perspective; and encompasses multiple activity settings. The life space or total social, physical, institutional and cultural environment of a particular child is so large that it hinders in-depth understanding of the meaning of participation, the influence of environmental qualities on participation, and the presumed effects of participation on social, physical, psychological and civic outcomes. A recurrent issue in the literature is how to conceptualize domains and dimensions of environments on a more micro level. Lack of appropriate micro units of analysis makes it unclear which aspects of environments are the most important for health and well-being, and why [18]. If participation is viewed as a transaction occurring at the nexus of the person-task-environment [23], then ways are needed to characterize this environment at the micro level.

Conceptualizations of environments not only differ in the breadth of their scope, but also in whether they focus on physical, social, cultural, institutional factors or a combination of these. The environment is often considered a container for action or an

external force or set of forces that enable or constrain participation or performance [18]. In a functional perspective, life situations or activity settings are seen as having specific goals [3,49]. An alternative view is to simultaneously consider both the functionality and experiential aspects of environmental settings [50].

While some measurement approaches aim to assess the totality of a child's environment and participation, this approach does not provide a clear understanding of the processes or mechanisms by which specific environmental qualities lead to more or less optimal participation experiences. We need to be clear which social, physical, aesthetic and opportunity-providing contexts we are referring to when talking about specific phenomena. Furthermore, examining higher versus lower levels of participation across the child's life is problematic to interpret, since more participation is not necessarily better [51]. The quality of participation can be better gauged by considering the quality of an individual's experience in a particular activity setting, such as reading a book at home, hanging out with friends or taking part in a music lesson. We therefore focus on a more micro unit of environmental analysis (the activity setting) and youth experiences of these activity settings.

Environments as containing multiple activity settings

Home, school and community environments contain many different types of activity settings, each with different possibilities and opportunities for youth. Since the school environment, for example, is made up of many activity settings [30], youth experiences can vary greatly within a given school. The experience of participation depends on the activity taking place, the others present, and the affordances and qualities of the psychophysical setting. For example, the experience of talking in the school yard with friends or eating alone in the cafeteria are very different than the classroom experience, and classroom experiences also vary widely depending on teacher qualities, the classroom configuration and the other students present.

If we are interested in understanding the qualities of optimal environments – those that provide positive participatory and growth-enhancing experiences – then an activity setting approach is an ideal way to proceed. We need to refine the way the notion of developmental context is conceptualized and operationalized, since we should not expect different settings to have similar impacts on children's growth [52].

Activity settings as joint entities unifying environmental qualities and experiences

The notions of “activity” and “setting” are intertwined: it is often not clear to what extent outcomes are caused by different activities taking place versus the settings per se [53]. The concept of “activity setting” recognizes that “activity” happens in the context of a social and physical “environment”; this indicates the importance of considering activity and setting as a joint entity. Harding et al. [54] reported that children with disabilities found it difficult to differentiate their experience of place from the activity done there. They concluded that there is a deep interconnection between childhood activities and settings in which they occur, indicating the need to conceptualize place/setting and activity together, as in “activity setting”.

The notion of “activity setting” unifies behavior, subjective experience and external features into a common phenomenon [43]. By incorporating subjective experiences, “activity settings” reflect the role of the environment in participation and the meaning attached to places, people and activities [18]. Participation is not solely about the number of activities that a child or youth does or their frequency of involvement;

a crucial aspect is the meaningfulness of participation experiences to youth [18].

In summary, the concept of activity setting narrows the scope of “environment”, enabling us to consider how environmental qualities of settings afford the opportunity for various kinds of experiences, such as engagement, concentrated effort and interest [15]. The key idea in our view of activity settings is that *opportunities* (i.e. environmental affordances) and *experiences* are both necessary for development to occur. Youth cannot have growth-enhancing experiences without available opportunities, but can be in settings that provide opportunities yet not have the intended experiences.

Issues in the measurement of participation and environment

Two current issues in the measurement of participation and environment in pediatric rehabilitation concern measurement specificity and the use of proxy reports.

The need for measurement specificity

Although the literature indicates the importance of developing participation and environmental measures that are specific to settings and activities [55,56], many measures of environmental qualities (versus measures of person–environment–occupation fit) focus on more distal features of more global environments, such as institutional factors influencing participation more generally, rather than the participatory experiences of children or youth. Measuring distal factors may lead to little evidence of associations between the environment and the meaning of participation. Noreau and Boschen [24] have noted that participation–environment interaction could be better illustrated by more specific and precise measures of the environment, and by avoiding environmental features in the construction of participation measures. There is a need for conceptualizations of environments that can reasonably be linked to “experience”, since it is important to measure experiences of participation and environmental qualities on the same level of analysis.

An activity settings approach has the advantage of measurement specificity. It allows us to measure aspects of both the context itself and the experiences and developmental functioning of the participants [2].

The need for self-reports of experience

The use of proxy reports is linked to a “barriers and supports” approach to participation measurement, where parents or other adults are asked to indicate environmental barriers or facilitators to a child’s participation. It has been argued that participation measures should focus on experience rather than proxy reports [56,57], and that parents’ *perceptions* of supports and barriers are different from the actual influence of these in specific contexts [24]. The measurement of youth experiences of activity settings addresses this issue. Assessing whether the environment acts as a facilitator or barrier to participation focuses to a large degree on entry into a life situation and does not tell us how a person “experiences” a particular activity setting [23]. “It is not sufficient to use a separate environmental assessment that asks about barriers in general across different settings or areas of participation, but instead the environment needs to be looked at as experienced in participation areas, not separate from them” [23].

The measurement of activity setting qualities and experiences

Much more has been written about activity settings from a theoretical than practical standpoint, including measurement.

As part of a Canadian Institutes of Health Research (CIHR) Emerging Team Grant in optimal environments for severely disabled youth, we developed two separate measures of activity setting qualities and experiences. The project aim was to elucidate the qualities of activity settings most highly associated with youth’s experiences of comfort, engagement, sense of meaning and benefit and social inclusion. We adopted a generalized affordances approach for the Measure of Environmental Qualities of Activity Settings (MEQAS) [58], and a functional and experiential viewpoint for the measure of Self-Reported Experiences of Activity Settings (SEAS) [59]; these measures have been developed and articles describing these measures have been submitted for publication. The MEQAS is a direct observation measure of aesthetic, social, physical and opportunity-related qualities of activity settings designed to be completed by adults with a good understanding of environmental qualities, whereas the SEAS is a youth self-report measure of emotional, interpersonal, intrapersonal, and transpersonal experiences, designed to be appropriate for *all* youth with a grade 3 level of language comprehension or more. We therefore developed both an assessment of environmental qualities, for which a need was clearly identified in a recent review by Reinhardt et al. [60], and a subjective measure of youth experience.

Our approach reflects a social science perspective, with the assessment of environmental qualities being separate from the assessment of youth experience. By linking measurement to the same activity setting, the measures of context and experience are matched with respect to the target entity. We developed the SEAS and MEQAS to be able to quantify environmental qualities independently from youth experiences, thus allowing the examination of statistical associations between activity setting qualities and experiences. As previously indicated, there is a widespread assumption that environmental qualities have specific effects on participation experiences, but little has been demonstrated empirically due to challenges in conceptualizing and measuring environments and participation [24]. The existing evidence concerns youth experiences of environments selected by researchers, but not measured with respect to their qualities.

Our approach reflects a microsettings perspective rather than a microsystemic (e.g. home, school, and community), mesosystemic (i.e. the relationship between microsystems) or macrosystemic (e.g. social policies) approach, as described by Bronfenbrenner [34]. A microsystemic approach emphasizes the processes influencing a child’s experiences and development over time in major physical or place-based contexts, such as school, whereas a microsettings perspective focuses on both subjective experiences and the objective reality of specific settings. The utility of assessing participation separately from environmental features has been discussed by Noreau and Boschen [24], and our focus on youth’s own reports of their experience is considered a more appropriate approach than the reports of proxies [57,61].

The MEQAS captures environmental qualities in the sense of “generalized predictions” of experiences and skills that could possibly arise from a given activity setting [4,62,63]. Perceiver error is reduced by the use of trained raters with an understanding of environmental qualities. The MEQAS reflects an ecological viewpoint, which holds that common experiences of settings are real and measurable [4]. When studying situational effects, it is implicitly assumed that one is dealing with “people-in-general” [64], in our case, “youth in general”. The MEQAS instructs raters to focus first on the physical setting and arranged environment [62], then look at the activity itself, and then more broadly consider the opportunities or possibilities of the activity setting as a whole.

The MEQAS provides a unique assessment of important environmental qualities *across* activity settings, enabling

Table 1. MEQAS and SEAS Scales and examples of items.

MEQAS Scales	MEQAS items ^a
Opportunities for social activities	Opportunity for socializing with peers
Opportunities for physical activities	A place with seating that supports conversation A place that invites movement (i.e. by paths, positioning of furniture)
Pleasant physical environment	Opportunity to engage in physical activity A nice environment to be in (e.g. not overly noisy or crowded, visually pleasing)
Opportunities for choice	A place with warm finishes or materials (e.g. wood rather than cement or steel) Opportunity to make choices or decisions
Opportunities for personal growth	Opportunity to have a say in what happens Multiple opportunities for personal growth or social experience
Opportunities to interact with adults	Opportunity for identity development Opportunity to engage in shared activity with adults A place in which youth are interacting physically or socially with adults
SEAS Scales	SEAS items ^b
Personal growth	I became better at something
Psychological engagement	I was challenged I was having fun
Social belonging	I was interested I got along with others
Meaningful experience	I belonged (i.e. I was part of the group) I talked about my thoughts and feelings
Choice and control	I shared ideas about things important to me I could choose what to do for the most part I was in control

^aStem: To what extent is the setting . . . OR To what extent does the activity setting provide an . . .

^bStem: I felt . . .

comparison of their features. There are no other existing measures of the aesthetic, physical, social and opportunity-related qualities of youth activity settings, as perceived by individuals observing an activity setting at a specific point in time. Existing measures of environmental qualities do not provide objective ratings of the qualities of a specific activity setting. They typically focus on a specific type of physical location such as a classroom, school or home, or, as in the case of the Participation and Environment Measure-Children and Youth version, all three microsystems. As well, very few measures capture qualities of outdoor environments, and only a few are relevant to youth, including Clark and Uzzell's [65] measure of adolescents' environments, and the Neighborhood Environment Walkability Scale-Youth [66].

Since little is known about how youth with disabilities experience their environments and activity settings [67], the SEAS fills an important gap by providing a comprehensive measure of youth's participation experiences of home and community recreation and leisure activity settings. The SEAS was developed to assess experiences of youth with severe disabilities (those who communicate using augmentative and alternative communication, and those with complex continuing care needs) but is applicable to youth in general – those with and without disabilities. A Picture Communication Symbols© (Pittsburgh, PA) version has been developed for youth who benefit from this type of support for reading comprehension.

Items from the MEQAS and SEAS scales are included in Table 1. The process of development and psychometric properties of the measures are included in forthcoming articles.

Strengths and weaknesses of our approach

The major advantage of our combined objective–subjective approach for understanding the influence of environmental qualities on participation experiences is the independent assessment of context and experience. Our measurement approach provides a setting-specific perspective that will allow comparisons of qualities and linked experiences *between* activity settings. The measures will permit statistical examination of hypothesized

relationships between qualities of recreation and leisure activity settings and youth participation experiences, and researchers and program evaluators will be able to examine assumptions that have been made about the relative value of different types of activity settings (e.g. formal versus informal; group versus solitary).

Our approach can be seen as having several weaknesses. First, we realize we are artificially truncating the “life space” with the activity setting construct. While our conceptual orientation acknowledges the interaction of person and activity setting, our measurement approach necessarily distinguishes person from environment. By taking a within-setting approach we are not considering “sustained experiences”, which are considered important for competence development [28]. Nonetheless, the SEAS and MEQAS will allow exploration of the dynamic interaction between an individual's experiences and afforded opportunities of their immediate activity setting.

Second, what is missing from our assessment package is a measure of youth-perceived affordances of activity settings. Developing such a measure is a difficult endeavor due to the likelihood of confounds with present and past experiences, personality traits, self-confidence and self-efficacy. For this reason, we elected to develop an objective measure of environmental qualities and affordances as rated by trained observers. A youth-perceived measure of affordances would, however, provide the middle ground between the SEAS and MEQAS, indicating the extent to which youth actually see the opportunities present in the same way as therapists or other adults with an understanding of environmental qualities.

Implications for research and theory

Little research has explicitly linked developmentally appropriate experiences to contextual factors, often proceeding as if development occurs in a “context vacuum” [52]. The combined use of the SEAS and MEQAS will provide a clearer understanding of types of activity settings and their effects. By examining similarities and differences in growth-enhancing experiences across activity settings, we can determine important qualities of environments

and the processes by which activity engagement has its positive effects [18], thus providing insights into “experiential pathways” to outcomes such as self-efficacy and skill development [15].

The SEAS and MEQAS will allow discovery of links between activity settings, experiences and longer-term developmental benefits, as outlined in a model of developmental health [18]. Past studies have demonstrated the context specificity of experiences/behavior [3,35] and researchers have begun to ask questions about associations between specific characteristics of activity settings, such as the social partners involved and the nature of the activities, and youth experiences of formal after-school programs [15]. Some activity setting qualities may have multiple impacts on experiences, and some experiences may occur only when a specific type of environmental quality is present. Together, the SEAS and MEQAS will generate better understanding of the context specificity of experiences and the process of enablement.

The next stage in our program of research is to examine associations between the profiles of experiences and setting qualities generated by SEAS and MEQAS, both within and across different types of activity settings. Since environmental opportunity does not ensure that the “right” experiences actually occur, an important direction for future research will be to examine the role of personal and historical factors in influencing experiences. This approach will allow us to determine which personal factors (e.g. familiarity, preferences, expectations, capacity, and performance) influence experience in a given activity setting. In other words, studies can examine the role of personal factors in conjunction with environmental qualities (MEQAS) in influencing experiences (SEAS).

Use of the SEAS and MEQAS will allow comparison of experiences across activity settings (such as sports/active physical activities versus creative arts programs), as well as over time, developmental progress, institutions and programs. As well, the SEAS and MEQAS could be used in outcome studies examining what contributes to competence development, by examining youth’s experiences and activity setting characteristics over time.

According to Luke [68], four analytical methods can be used to capture context: multilevel modeling, geographic information systems, social network analysis and cluster analysis. We plan to use cluster analysis to relate contextual variation to different youth experiences, reflecting the use of sophisticated analytical methods to better understand the complex nature of participation and the role of the environment [24]. In addition, visual representation techniques such as topographical maps and radar plots [23,69] could be used to represent activity setting experiences and qualities in a meaningful way, allowing researchers to see common patterns of association that could then be examined statistically. These techniques could be used to illustrate how personal experiences (SEAS profiles) map on to environmental affordances (MEQAS profiles) across activity settings of different types.

There is a need for theories of place-based participation that specify key factors and processes that account for experiences of participation and meaning in everyday life. A fundamental challenge facing the field of pediatric rehabilitation is to develop new ways of conceptualizing and capturing the antecedents, correlates and processes that characterize participation in activity settings [70]. Knowledge resulting from the use of the SEAS and MEQAS can assist with building the constructs and propositions underlying a theory of activity setting environments for youth with disabilities.

Implications for clinical practice

All types of effective intervention affect activity either directly, by changing the components of a target activity setting, or indirectly

by changing the surrounding macrosystem [43]. The advantage of real-world participation-based interventions is that they directly target participation in natural settings [27]. Socioecological models of intervention can be developed using an activity settings model as a starting point [45] and utilizing the SEAS and MEQAS.

Parents select intervention programs, clinicians recommend programs and health care professionals design programs in the belief that certain types of experiences and benefits will occur; however, children and youth may experience programs in different ways than intended [44]. The combined use of the SEAS and MEQAS can provide experiential profiles linked to activity setting qualities such as structure, type of activity and social partners, providing a valuable source of information about youth programs. In addition, clinicians might use the SEAS alone to understand particular youth experiences in certain types of settings, which may be limiting or facilitating development. Program developers could use the MEQAS alone to determine whether the intended aesthetic, social, physical and opportunity-related qualities of designed activity settings are in fact perceived to be present by objective observers. Use of both measures will provide policy makers with information about the qualities and experiences typical of different types of youth programs [15].

In conclusion, this article has discussed how an activity setting perspective can enhance understanding of the recreation and leisure participation of children and youth with disabilities. The MEQAS and SEAS provide unique assessments of environmental qualities and experiences from an activity setting perspective.

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Declaration of interest

The authors have no declaration of interest to report.

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