

# Staff Strategies and Environmental Approaches in Handling Challenging Behaviors in Disability Centers: A Systematic Literature Review

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Article History	Abstract
<b>Meta-analysis Article</b>	<p><i>Challenging behaviors such as aggression, self-injury, disruptive conduct, and property destruction are commonly observed among individuals with intellectual and developmental disabilities and present significant challenges for disability centers and residential care facilities. This study aimed to systematically review recent literature on staff strategies and environmental approaches used in handling challenging behaviors in disability service settings. Specifically, it examined the intervention strategies employed by staff, the environmental approaches utilized to reduce challenging behaviors, the challenges encountered by caregivers and support personnel, and the implications for disability care practice. A systematic literature review design was employed, drawing from peer-reviewed journal articles, doctoral dissertations, and scholarly publications published between 2020 and 2025. Selected studies were screened based on relevance and analyzed using thematic analysis to identify recurring themes and patterns. Findings revealed that staff strategies such as Positive Behavior Support, functional behavioral assessment, staff training, collaborative practice, individualized interventions, and trust-based relationships significantly contribute to the effective management of challenging behaviors. Environmental approaches including therapeutic architecture, room personalization, sensory regulation, contextual support, and residential environmental modifications were also found to improve behavioral outcomes, autonomy, and quality of life among individuals with disabilities. However, challenges such as staff burnout, emotional stress, resource limitations, inadequate training, difficulties in behavioral assessment, and concerns regarding psychotropic medication use continue to affect service delivery. The study concludes that the successful management of challenging behaviors requires an integrated, person-centered approach that combines staff competency development with supportive environmental interventions. The findings highlight the importance of continuous professional development, organizational support, therapeutic environmental design, and evidence-based practices to promote positive behavioral outcomes and enhance the quality of care in disability centers.</i></p> <p><b>Keywords:</b> <i>challenging behaviors, intellectual disabilities, developmental disabilities, disability centers, staff strategies, environmental approaches, positive behavior support, therapeutic environment, behavioral intervention, quality of life.</i></p>
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## INTRODUCTION

Challenging behaviors are common among individuals with intellectual and developmental disabilities and often include aggression, self-injury, property destruction, repetitive behaviors, and other disruptive actions that affect daily functioning and quality of life (Kawanaka et al., 2024; Kamlowksy, 2024). These behaviors present significant

challenges not only for individuals with disabilities but also for staff working in disability centers and residential facilities.

Support staff play a critical role in managing challenging behaviors through the use of intervention strategies,

behavior support plans, communication techniques, and individualized approaches. Studies have shown that trust-based relationships, staff collaboration, consistent intervention practices, and positive behavior support contribute to successful behavior management (Na et al., 2025; Bruinsma, 2025). Functional behavior assessment and staff training have also been identified as important components in reducing challenging behaviors and improving the quality of support provided to individuals with disabilities (Kamlowsky, 2024; Johansson & Antonsson, 2025).

In addition to staff strategies, environmental factors significantly influence the occurrence and management of challenging behaviors. Research has demonstrated that modifying living environments through room redesign, therapeutic architecture, sensory regulation, and personalized contextual support can improve behavior, increase autonomy, and enhance quality of life (Roos et al., 2025; Vollmer et al., 2024; Verhaar et al., 2024). Similarly, restructuring residential facilities to provide more private and organized living spaces has been associated with reductions in aggressive and stereotypical behaviors among residents with intellectual disabilities (Kawanaka et al., 2024).

Despite the growing body of research on challenging behavior management, staff continue to experience difficulties such as burnout, emotional stress, inadequate training, heavy workloads, and limited organizational support (Womack et al., 2020; Montanes Muro et al., 2021; Na et al., 2025). These challenges highlight the need for evidence-based strategies and supportive environments that can assist both service users and staff.

Although several studies have examined staff interventions and environmental modifications separately, there remains a need to systematically synthesize current literature regarding how these approaches contribute to the management of challenging behaviors in disability centers. Therefore, this study aims to review and analyze existing literature on staff strategies and environmental approaches in handling challenging behaviors among individuals with intellectual and developmental disabilities.

### **Theoretical and Conceptual Framework**

This review is anchored on Positive Behavior Support (PBS), Social Ecological Theory, and Person-Centered Care Theory.

Positive Behavior Support emphasizes proactive interventions that focus on understanding the functions of challenging behaviors and implementing supportive strategies to improve quality of life while reducing problem behaviors. This framework highlights the importance of

staff training, behavioral assessment, and individualized support plans.

Social Ecological Theory explains how behavior is influenced by interactions between individuals and their environments. Within disability centers, environmental factors such as physical space, sensory stimuli, organizational culture, and social relationships significantly affect behavioral outcomes.

Person-Centered Care Theory emphasizes individualized support, autonomy, dignity, and active participation in decision-making. This framework supports the creation of personalized interventions and environments that respond to the unique needs of individuals with intellectual and developmental disabilities.

The conceptual framework posits that staff strategies including behavioral assessment, positive behavior support, staff training, collaboration, communication, and emotional support and environmental approaches including therapeutic architecture, room redesign, sensory regulation, contextual support, and environmental modifications contribute to reducing challenging behaviors and improving quality of life among individuals receiving services in disability centers.

### **Statement of the Problem**

This systematic literature review aims to synthesize recent literature on staff strategies and environmental approaches in handling challenging behaviors in disability centers.

Specifically, it seeks to answer the following questions:

1. What staff strategies are utilized in managing challenging behaviors among individuals with intellectual and developmental disabilities?
2. What environmental approaches are used to reduce challenging behaviors in disability centers?
3. What challenges do staff encounter in managing challenging behaviors?
4. What implications can be drawn for disability care practice, policy development, and future research?

## **METHODOLOGY**

### **Research Design**

This study employed a Systematic Literature Review (SLR) design to comprehensively examine and synthesize existing scholarly literature regarding staff strategies and environmental approaches used in managing challenging behaviors among individuals with intellectual and developmental disabilities in disability centers and residential care settings. The systematic literature review method was selected because it provides a rigorous, transparent, and evidence-based process for identifying,

evaluating, and integrating findings from multiple studies. Through this approach, the study was able to identify recurring themes, intervention practices, environmental factors, challenges, and implications associated with managing challenging behaviors, thereby providing a consolidated understanding of current evidence and best practices in disability support services.

### **Corpus of the Study**

The corpus of the study consisted of peer-reviewed journal articles, doctoral dissertations, and scholarly publications focusing on challenging behaviors among individuals with intellectual and developmental disabilities and the strategies used to address them in disability service settings. The selected literature included studies published between 2020 and 2025 that examined staff competencies, positive behavior support, functional behavioral assessment, therapeutic architecture, environmental modifications, sensory regulation, psychotropic medication practices, caregiver experiences, and organizational support systems. Only studies that provided empirical findings, qualitative insights, quantitative evidence, mixed-method analyses, or theoretical contributions relevant to disability centers, residential facilities, and support services were included to ensure the relevance and credibility of the review.

### **Instrumentation**

A researcher-developed literature review matrix served as the primary instrument for data extraction, organization, and synthesis. The matrix was designed to systematically record essential information from each selected study, including the author(s), year of publication, research title, research design, participants, setting, staff strategies, environmental approaches, key findings, identified challenges, and implications for practice. The use of the literature review matrix facilitated consistent documentation, comparison, and categorization of data across multiple sources, enabling the researcher to identify patterns, relationships, and emerging themes related to the management of challenging behaviors in disability centers.

### **Data Gathering Procedure**

The data gathering process involved a systematic review of relevant scholarly literature related to challenging behaviors, intellectual and developmental disabilities, behavioral interventions, staff training, environmental modifications, therapeutic design, sensory regulation, and disability support services. The selected studies were screened based on their titles, abstracts, and full-text content to determine their relevance to the objectives of the review. Studies that did not directly address staff strategies, environmental approaches, or challenging behaviors within disability-related contexts were excluded. Following the screening process, eligible studies were carefully reviewed

and documented using the literature review matrix, allowing for the organized collection of information regarding intervention methods, environmental supports, staff experiences, organizational challenges, and outcomes associated with challenging behavior management.

### **Data Analysis**

The collected data were analyzed using thematic analysis to identify recurring concepts, patterns, and trends across the selected studies. Information extracted through the literature review matrix was coded and categorized according to common themes emerging from the literature. Through this process, major themes related to staff strategies, environmental approaches, challenges encountered by staff, and implications for disability care practice were identified and further organized into corresponding subthemes. Comparative analysis was subsequently conducted to examine similarities, differences, and relationships among the findings of the reviewed studies, enabling the development of evidence-based conclusions and recommendations regarding effective approaches for managing challenging behaviors in disability centers.

## **RESULTS AND DISCUSSION**

### **1. Staff Strategies in Managing Challenging Behaviors**

Theme 1: Competency-Based Staff Interventions

#### ***Subtheme 1: Trust-Based Relationships and Collaborative Practice***

Trust-based relationships between staff and individuals with intellectual and developmental disabilities emerged as a critical factor in successfully managing challenging behaviors. Na et al. (2025) found that trust-based relationships and collaborative strategy-sharing among disability welfare institution staff significantly contributed to successful interventions, whereas differences in interpretation and inconsistent implementation hindered positive outcomes. Similarly, Bruinsma (2025) reported that Positive Behavior Support (PBS) implementation was most effective when staff motivation, teamwork, organization-wide support, and collaborative practices were present. These findings suggest that effective management of challenging behaviors depends not only on individual staff competence but also on coordinated team approaches that promote consistency and shared understanding among caregivers.

#### ***Subtheme 2: Staff Training and Professional Development***

The literature consistently highlights the importance of staff training and competency development in managing challenging behaviors. Johansson and Antonsson (2025)

reported that direct support staff experienced difficulties in managing psychiatric symptoms associated with behaviors of concern and emphasized the need for educational and web-based training programs. Likewise, Johnson et al. (2025) found that training on psychotropic medication increased support staff knowledge regarding medication effects and side effects, improving their awareness in supporting adults with intellectual and developmental disabilities. Evans (2025) further demonstrated that staff training in sensory regulation strategies improved staff knowledge and contributed to positive behavioral outcomes among adults with intellectual and developmental disabilities. These findings indicate that continuous professional development is essential in equipping staff with the skills necessary to address complex behavioral challenges effectively.

### ***Subtheme 3: Functional Behavioral Assessment and Individualized Intervention***

Functional Behavioral Assessment (FBA) and individualized intervention planning emerged as evidence-based approaches for addressing challenging behaviors. Kamlowky (2024) demonstrated that individualized FBAs successfully identified the functions maintaining challenging behaviors among adults with intellectual and developmental disabilities, enabling the development of effective function-based treatments. The study further revealed that treatment effects were maintained when implemented by residential and day-service staff within natural service environments. These findings emphasize the importance of understanding behavioral functions before implementing intervention strategies and highlight the value of individualized approaches tailored to specific behavioral needs.

### ***Subtheme 4: Positive Behavior Support Approaches***

Positive Behavior Support (PBS) emerged as one of the most effective non-pharmacological approaches for managing challenging behaviors. Bruinsma (2025) reported that PBS training reduced lethargic and irritable behaviors among adults with severe challenging behaviors and enhanced personal development and self-determination. Staff also reported improved calmness and more positive interactions with service users following PBS implementation. Additionally, the meta-analysis included in Bruinsma's study demonstrated that behavioral interventions combined with mindfulness approaches effectively reduced challenging behaviors. These findings support the use of proactive, person-centered, and evidence-based behavioral support approaches in disability care settings.

## **2. Environmental Approaches in Managing Challenging Behaviors**

Theme 2: Therapeutic and Supportive Environments

### ***Subtheme 1: Residential Facility Design and Environmental Modification***

Environmental modifications within residential facilities significantly influence behavioral outcomes. Kawanaka et al. (2024) found that transitioning residents from traditional shared accommodations to facilities incorporating private spaces and unit-care systems resulted in significant reductions in aggressive, stereotyped, and self-injurious behaviors. The authors attributed these improvements to reduced environmental stressors and increased predictability within living environments. These findings suggest that environmental design can play a crucial role in minimizing triggers associated with challenging behaviors.

### ***Subtheme 2: Room Personalization and Homelike Environments***

Research examining room redesign and personalization demonstrates the benefits of creating more homelike and individualized living spaces. Roos et al. (2025) observed improvements in quality of life, mood, social behavior, daily living skills, and reductions in self-harm and behavioral problems following room redesign interventions. The redesigned spaces incorporated privacy, natural materials, outdoor access, and personalized features. Staff members also reported safer, more pleasant, and more functional working environments. These findings indicate that personalized environmental modifications contribute to both client well-being and staff effectiveness.

### ***Subtheme 3: Therapeutic Architecture and Spatial Organization***

Therapeutic architecture has been identified as an innovative approach for supporting behavioral regulation and autonomy. Vollmer et al. (2024) identified four architectural design principles that promote autonomy among individuals with severe intellectual disabilities and challenging behaviors: spatial sequencing and repetition, privacy-related variation, daylight integration, and emotional proximity to caregivers. These design elements help create structured and predictable environments that facilitate independence while reducing anxiety and confusion. The findings support the role of evidence-based architectural design in creating therapeutic residential settings.

### ***Subtheme 4: Sensory Regulation and Contextual Support***

Sensory regulation and personalized contextual support are increasingly recognized as important environmental approaches. Evans (2025) developed a sensory regulation

program that included individualized sensory strategies, staff training, and environmental supports, resulting in positive changes among participants and staff. Similarly, Verhaar et al. (2024) found that higher levels of personalized contextual support were associated with improved quality of life among individuals with intellectual disabilities and severe challenging behaviors. These findings underscore the importance of adapting environmental conditions to individual sensory and support needs.

### **3. Challenges Encountered by Staff**

Theme 3: Organizational and Professional Barriers

#### ***Subtheme 1: Emotional Burden and Burnout***

Managing challenging behaviors places significant emotional demands on support staff. Na et al. (2025) reported that repeated exposure to challenging behaviors, heavy workloads, and caregiver expectations contributed to staff burnout. Similarly, Womack et al. (2020) found that exposure to aggression was associated with fatigue and negatively affected the psychological health of personal support workers. Montanes Muro et al. (2021) further emphasized that support staff frequently experience emotional reactions when managing challenging behaviors, highlighting the importance of monitoring staff well-being. Together, these findings demonstrate the need for organizational support systems that address staff stress and resilience.

#### ***Subtheme 2: Limited Resources and Institutional Constraints***

Several studies identified resource limitations as barriers to effective intervention. Na et al. (2025) emphasized the need for staffing allocations based on severity levels, support systems, manuals, and long-term consultation services. Grüter (2024) reported that caregivers often faced inadequate institutional conditions, insufficient training, and limited access to specialized expertise. These barriers hinder the implementation of effective intervention strategies and contribute to staff frustration and burnout.

#### ***Subtheme 3: Difficulties in Assessment and Decision-Making***

Assessment and decision-making challenges are common among disability support staff. Na et al. (2025) reported difficulties in identifying the functions of challenging behaviors and managing ethical and practical constraints. Johansson and Antonsson (2025) found that staff frequently experienced difficulties recognizing psychiatric symptoms associated with behaviors of concern. Similarly, Grüter (2024) highlighted challenges related to recognizing ambiguous behaviors and understanding nonverbal indicators of emotional well-being. These findings suggest

the need for enhanced assessment tools, specialized training, and interdisciplinary collaboration.

#### ***Subtheme 4: Medication Management Concerns***

The use of psychotropic medication remains a complex issue in the management of challenging behaviors. Kelly et al. (2025) found differing perceptions among stakeholders regarding psychotropic medication use, influenced by organizational, cultural, professional, and relational factors. Johnson et al. (2025) reported that although staff training improved knowledge of psychotropic medications, its impact on medication use remains unclear. Furthermore, Stellato et al. (2025) found that psychotropic medication adjustments generally produced only small behavioral effects, emphasizing the need for greater collaboration between prescribing professionals and behavioral specialists. These findings support recommendations that medication should be used cautiously and in conjunction with behavioral and environmental interventions.

### **4. Implications for Disability Care Practice**

#### ***Theme 4: Enhancing Quality Care Through Integrated Approaches***

The literature suggests that the effective management of challenging behaviors requires the integration of staff-focused and environment-focused interventions. Evidence supports investments in staff competency development, Positive Behavior Support implementation, sensory regulation programs, individualized behavioral assessment, and collaborative care approaches (Bruinsma, 2025; Kamlowky, 2024; Evans, 2025). Simultaneously, environmental modifications such as therapeutic architecture, contextual support, room personalization, and residential redesign contribute to improved quality of life and reductions in challenging behaviors (Kawanaka et al., 2024; Roos et al., 2025; Vollmer et al., 2024; Verhaar et al., 2024). Collectively, these findings indicate that disability centers can achieve more sustainable and person-centered outcomes when staff strategies and environmental approaches are implemented simultaneously within a comprehensive support framework.

## **CONCLUSION**

The literature reviewed demonstrates that both staff strategies and environmental approaches play essential roles in managing challenging behaviors among individuals with intellectual and developmental disabilities. Staff-related factors such as positive behavior support, functional behavioral assessment, professional training, collaboration, and individualized intervention planning contribute significantly to behavioral improvement and enhanced quality of life. Likewise, environmental factors including therapeutic architecture, room redesign, sensory regulation,

contextual support, and personalized living environments influence behavioral outcomes by reducing stressors and promoting autonomy.

The findings further reveal that staff face numerous challenges, including emotional burden, burnout, resource limitations, assessment difficulties, and medication-related concerns. These challenges highlight the importance of organizational support systems, ongoing professional development, and evidence-based care practices.

Overall, the evidence suggests that the most effective management of challenging behaviors occurs when staff competencies and environmental supports are integrated within a person-centered framework. Such an approach promotes dignity, safety, inclusion, and quality of life for individuals receiving services in disability centers while simultaneously enhancing staff effectiveness and well-being.

## RECOMMENDATIONS

1. Disability service administrators should strengthen staff training programs focusing on Positive Behavior Support, functional behavioral assessment, psychiatric symptom recognition, and crisis intervention.
2. Organizations should establish comprehensive staff support systems that address burnout, emotional well-being, workload management, and professional resilience.
3. Disability centers should implement therapeutic environmental modifications, including personalized living spaces, sensory supports, and evidence-based architectural design principles.
4. Policymakers should allocate resources for staffing, professional development, infrastructure improvements, and evidence-based behavioral support services.
5. Support staff should adopt collaborative, person-centered, and proactive intervention approaches that emphasize prevention rather than reactive behavior management.
6. Researchers should conduct longitudinal and experimental studies examining the combined effects of staff strategies and environmental interventions on behavioral outcomes.
7. Future studies should further investigate sensory regulation, therapeutic architecture, psychotropic medication decision-making, and organizational factors influencing successful implementation of behavioral support programs.

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