Toward a Physical Environmental Continuum for Occupational Intervention in a Rehabilitation Hospital

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ABSTRACT. A study was conducted to explore occupational therapists’ perceptions of rehabilitation environments and the influence of these perceptions on practice and occupational interventions. Traditionally, inpatient occupational therapists have a choice of intervention environments, ranging from a gym-like to a more home-like setting. Choosing to provide interventions in these different environments can have an impact on occupational performance. In this qualitative exploration, 21 occupational therapists participated in focus groups designed to explore their perceptions of practice environments. Analysis of the transcribed data revealed that therapists felt rehabilitation environments should offer choices and be flexible, that environments influenced intervention strategies, and that the practice environment had an impact on professional identity. On the basis of this data, a conceptual matrix of the intersection of environmental setting and occupation-based interventions is presented to highlight the importance of these two aspects of therapy. Future research in this understudied area is needed to transform this matrix into a clinically useful model.

KEYWORDS. Environment, occupation-based practice, rehabilitation, person-environment-occupation model

INTRODUCTION

Occupational therapy is based on the holistic belief that health and well-being are closely connected to the occupations in which one participates and finds to be personally meaningful (American Occupational Therapy Association [AOTA], 2008). McLaughlin Gray (1998) advocates that the culmination of therapy should be restoration of “a client’s occupational life” (p. 357). If the therapy reflects a client’s life then there will be greater generalization of learned skills and ultimately improved occupational performance. The use of occupation in occupational therapy is the fundamental tenet of the field (Baum & Baptiste, 2002). Many factors may influence the success of both using occupation in the therapeutic process and
the ultimate return to desired occupations after rehabilitation. In this article, the influence of the built environment on the use of occupation-based interventions is explored.

**Environment**

The fact that treatment environments influence a client and their performance has been a known fact for many years (Moos, 1974). In an occupational therapy intervention environment, three key components are required for occupation-based practice: the client, the occupation, and the environment. These three elements and their interactions are also the foundation for the Person, Environment, Occupation Model (PEO; Law et al., 1996). The PEO model has contributed to a shift from the medical model of treating the client’s impairments to a transactional model focusing on occupational performance as an “interwoven relationship that exists among people, their occupations and roles, and the environments in which they live, work and play” (Law et al., 1996, p. 10). The PEO model proposes that the person, environment, and occupation all interact continuously over time and space. These three areas overlap with the level of fit or congruence representing occupational performance. Intervention using the PEO model attempts to maximize the fit of the person, environment, and occupation allowing for more integration of the three domains and more efficient and effective occupational performance. This requires the therapist to address personal and environmental considerations in adapting the intervention environment (or choosing another environment) or modifying the occupation to maximize occupational performance (Law et al., 1996).

An important aspect of this model is the explicit inclusion of an environment. Social and physical context is an important component in the therapeutic process. The built environment is a large part of practice and contributes to outcomes in healthcare. The idea that the physical environment is important in occupational therapy is not new (Rowles, 1991, 2000, 2008). Many theories, including the model of Occupational Adaptation (Schkade & Schultz, 1992) and the Model of Human Occupation (Kielhofner, 2002), acknowledge the importance of the physical environment as an important part of effective therapy. Successful adaptation for occupational performance is defined by Schkade and Schultz as the client being satisfied and able to meet the demands of their environment. Yet, very little research on inpatient therapy and rehabilitation specifically addresses the impact of the physical environment on therapeutic outcomes (the client meeting the demands of their environment).

Hybrid spaces have been advocated by Gilmour (2006), a merging of home and hospital space, in order to facilitate more personal relationships and reinforce each client’s sense of identity, comfort, and feelings of being “in-place” during the process of healing. Indeed, a series of studies have revealed that the design of hospital environments that are home-like enables clients to maintain a sense of personal control, provides emotional support, and speeds recovery (Torrington, 2006; Williams & Irurita, 2005). Gesler’s (1996) work with therapeutic landscapes also found that built environments that provide a sense of place contribute to healing and ultimately well-being. Therapeutic landscapes facilitate a positive transaction between the person and their environment. As Christiansen and Townsend (2004, p. 18) note, the “physical characteristics of landscape and objects invite participation in occupations.”
A well-designed rehabilitation center can help clients connect their therapy goals to life goals, which motivates them to work harder at their therapy (McClusky, 2008). Typical therapy gyms do not help clients make the connection between their rehabilitation goals, the exercises they do while in therapy, and their life experience at home (McClusky, 2008). Even more important, the rehabilitation environment needs to be able to motivate clients to engage and participate; if it does not, clients are more likely to merely sit and isolate themselves (Mackey, Ada, Heard, & Adams, 1996). Finally, if a hospital environment is perceived to provide limited choice and opportunity, it may lead to decreased occupational participation, while a supportive hospital environment is open to exploration, driven by the client’s needs and goals and accepting of the individual (Rebeiro, 2000). If the hospital environment provides space to practice cooking, cleaning, doing the wash, and/or shopping, the client is able to practice needed skills and build confidence before their discharge back to the community. A therapeutic environment, which is a good fit for the client, can facilitate progress toward specific goals as it provides a context for performance.

In inpatient rehabilitation, the therapy gym is a common location for occupational therapy. Typical therapy gyms have been described as institutional, with bright lights and lack of personal touches (Devlin, 2007). Such gyms often do not represent a client’s living environment and may limit the practice of direct occupations. Therapy gyms evolved from the Greek concept of a gymnasium as a “room designed or equipped for indoor sports, exercise” (Random House Webster’s unabridged dictionary, 1998, p. 853). Historically, reduction of impairment approaches used a medical model based on an assumption that when impairment was lessened it would de facto improve function, a view aligning with a focus on exercise in a therapy gym (Law, Baum, & Baptiste, 2002). Hence, the treatment focus was on physical performance components such as increasing muscle power and energy and not on directly teaching skills needed to return home or to work.

**Occupation-Based Practice**

From the field of occupational science, it has been posited that clients can be dissatisfied with traditional therapy that is not grounded in meaningful occupations (Molineux, 2004). In contrast, Clark (1993) postulated that when occupations used in therapy represent the client’s desired roles, they are therapeutic. Lang, Nelson, and Bush (1992) found that clients perform greater repetitions when participating in a meaningful occupation as compared with engaging in rote exercise.

The Occupational Therapy Practice Framework (OTPF; AOTA, 2008) was developed to guide therapists to use occupations as the center of their practice. The OTPF is “a summary of interrelated constructs that defines and guides occupational therapy practice (AOTA, 2008, p. 625). The concepts presented in the OTPF guide occupational therapists to promote health and participation through the use of occupation. Theoretically, occupation-based practice as proposed by the OTPF provides the occupational therapist with specific tools to move a client toward optimal occupational performance. There are three types of occupation-based interventions in the OTPF: preparatory methods, purposeful activity, and occupation-based practice. Preparatory methods are used to prepare the client for purposeful and occupation-based activities. If a client has poor muscle strength and
postural stability then the therapist may work on sitting at the edge of bed in preparation for dressing. *Purposeful activity* as defined by the OTPF is when a client engages in specifically selected activities that allow him or her to develop skills that enhance occupational engagement. A purposeful activity in the therapy gym has the client using a reacher or dressing stick to practice picking out clothing items from the closet or donning socks and shoes. Finally, for *occupation-based practice*, clients engage in desired occupations. For example, the therapist encourages the client to dress and groom themselves, in their room, in an appropriate timeframe (morning).

Occupation has been the core of occupational therapy since its inception in 1917. Fisher (1998) recommends that occupation and activity should only be used when it is meaningful and purposeful to the individual and their goals and occupation-based practice uses occupation in practice. Pierce (2003) suggests that occupation is the *essence* of practice as using it in a therapy promotes positive change in the performance of the occupations (p. 240). She also espouses that occupation-based practice needs to incorporate occupations that are valued and driven by the client and not the therapist. Her occupation-based process was described as free flowing with no set protocols and includes as many experiences as possible in the natural context or environment so it does not feel contrived to the client. Baum and Baptiste (2002) write that occupation-based practice creates the need for occupation to be at the core of the treatment process and participation is an outcome. When evaluating occupation-based practice in a hospital-based facility, Estes and Pierce (in press) found that occupation-based practice was an effective intervention because it allowed the therapy to be individualized but was difficult to implement due to time constraints and productivity demands.

The question arises, how do physical spaces in inpatient rehabilitation environments influence occupational interventions and the therapeutic process? This study was designed to explore the perceptions of occupational therapists regarding effective inpatient rehabilitation settings and the degree to which such environments influence occupational interventions and occupational therapy practice in an inpatient setting. After analyzing the data from the study, a conceptual matrix was developed to clearly connect the therapeutic environment with the therapeutic intervention, utilizing the OTPF and the PEO model. The goal of the matrix is to clearly draw attention to potential interactions between types of environments and therapeutic interventions used in an inpatient rehabilitation setting.

**METHODS**

**Participants**

Occupational therapists participating in this study were recruited from a 108 bed, Midwestern, freestanding rehabilitation hospital with inpatient, home health, and outpatient services. Fifty-one occupational therapists working with adults in the hospital were invited to participate. Twenty-one (41%) were motivated to explore this topic and chose to participate in this study over the lunch hour, although other therapists could not participate because of treating clients or attending client-related meetings during this time frame. Participants’ experience ranged from
11 months to 33 years with an average of 8.8 years. Their ages spanned 24–55 years old with the mean of 28 years. Consistent with the occupational therapist population as a whole at this facility, all of the participants were female (there is only one male occupational therapist at the facility) and all were Caucasian.

**Procedure**

A qualitative descriptive methodology was utilized. Qualitative descriptive studies are able to offer a comprehensive summary of events, which is particularly useful in addressing questions of special relevance to practitioners (Sandelowski, 2000). Such studies allow the researcher to address questions such as “What are the concerns of people about an event?” and “What reasons do people have for using or not using a service or procedure?” Data collection involved minimally to moderately structured, open-ended questions to generate descriptive summaries of the participants’ views and experiences. Such summaries may result in working concepts and hypotheses for future grounded theory development or phenomenological study (Sandelowski, 2000). In addition, a funnel strategy of data collection and analysis took place. This entailed data collection from a study population, analysis of data, and follow-up data collection with a smaller subset of the population, chosen on the basis of insights from the initial analysis, to increase the depth and richness of the data and insights (Bruce, 2007). Three initial focus groups ($n = 21$) were conducted over 4 months. A follow-up focus group ($n = 3$) with a subset of key informants was completed 8 weeks later.

Each 60-minute focus group was held during the participants’ lunch period. Each group was recruited from the unit of the hospital where they worked. As a result, the therapists were among close peers who worked in a shared physical environment. This contributed to an environment that fostered and supported the participants’ discussion of the topics. Each of the initial groups consisted of 5–8 participants. Focus group I consisted of therapists from the stroke program. Focus group II included therapists from the brain injury, pulmonary, and outpatient units. Focus group III consisted of therapists from the spinal cord and general rehabilitation and outpatient units. Focus group discussions were audiotape recorded and transcribed verbatim for preliminary analyses. Findings from each completed focus group were used to inform the questions asked of participants in the subsequent focus group.

In the initial three focus groups, open-ended questions were posed on the therapists’ perceptions of therapeutic environment, the state of their current practice, and the manner in which they felt the environment influenced their interventions. The follow-up key informant group included three therapists who had participated in the initial focus groups. These occupational therapists were chosen as they were considered to be especially perceptive and articulate senior rehabilitation experts. Prior to this group meeting, each of the three therapists independently read a summary of the identified themes generated in the first focus groups.

The focus groups and key informant meetings were conducted by the primary investigator. Approval to conduct the study was granted by the rehabilitation hospital’s institutional review board. Written informed consent was obtained before data were collected.
Analysis

Transcriptions and data interpretation were undertaken after each focus group. Following standard practice, audiotapes of the focus groups were transcribed by the principle investigator and read and reread for coding and categorization (Glaser & Strauss, 1967). Inductive thematic content analysis procedures were employed (Gubrium, 1993; Kaufman, 1986; Rubenstein, 1988, 2002; Shawler, Rowles, & High, 2001). Hand coding of transcripts facilitated nuanced understanding of meanings in the narrative text (Schoenberg & Rowles, 2002). Coding and interpretation was an ongoing iterative process. Each transcript was read several times and line-by-line color coded by specific emergent content categories. Such open coding is defined as marking the segments of data with symbols, descriptive words, or category names. Categories were derived inductively—that is, obtained gradually from the data. All the data relevant to each category were identified and examined using the method of constant comparison, in which each item is checked or compared with the rest of the data to establish analytical categories (axial coding). Codes (words) and categories (ideas) were incorporated into separate topical files and then aggregated into more general emergent themes through a process of selective coding. This process enabled each subsequent focus group to be informed by and achieve increased focus from what had been learned previously; as this iterative process continued a deeper level of understanding developed (Dreyfus, 1995).

Rigor and Credibility

Several steps were taken to ensure that the findings were faithful to the participants’ descriptions. All of the focus group sessions were conducted by the principle investigator to provide continuity across interviews and reduce bias that might be attributed to differences among focus group moderators. Reflective journal entries were made throughout the study (Crabtree & Miller, 1999). Emergent themes derived from careful reading and rereading of the transcripts were enhanced by two methods: follow-up with key informants and independent review of the transcripts by two experienced qualitative researchers (both were licensed occupational therapists, with no relationship to the project). Finally, the data were triangulated with the literature in order to assess compatibility with extant research.

FINDINGS

Three primary themes emerged from the focus group data analyses.

Theme 1: Therapeutic Environmental Spectrum

Three different types of environments were identified by the focus groups. First was the gym environment, which included exercise equipment, and was used for cognitive tasks, fine motor activities, and simple occupational task such as folding laundry or organizing medications. The second type of environment was a combination area, which was based in the gym but included some items such as a stove and refrigerator. The third environment was a more natural, simulated home-like environment, a practice apartment located in the study hospital. While there are more institutional components in a simulated home-like setting, such as fluorescent
lighting and institutional tile floors, there are also some home-like items, like a bed, washer and dryer, vacuum, and full kitchen. The practice apartment correlates with what one might find at home. Each unit in the hospital has a therapy gym and a combination area but the facility as a whole has only one simulated home-like practice apartment, which is more conveniently located for two of the six units.

The therapists realized that no single environment would meet their needs and none were inherently superior to another, rather the notion of an environmental spectrum emerged. This range of settings would allow the therapist and client to conduct optimal, client-centered practice within a maximally supportive space. Flexibility in the environment would allow for the adaptation and transformation of the environment for each client in relation to their stage of recovery, their individual goals, and the type of environment to which they are returning home. One therapist commented:

I think we still need mats [in the gym] because you know when you're working on scapular exercises or mobility or weight bearing.

Within this environmental spectrum, all of the occupational therapists answered that they ultimately would want to practice in a simulated home-like environment, one that was most similar to their client’s home with a few items from a therapy gym. In a flexible, home-like environment, the client’s specific home environment could be simulated through the client’s home evaluation. Then, for example, the toilet could be placed right next to the tub and there might be little room to move in the bedroom, allowing the client to master the skills needed to perform tasks in their home in the community. As one therapist said:

... Sometimes they don’t understand how hard it is, they think that it’s going to be fine, or they will be able to get into their shower [at home] but then they can’t step up the step on the shower door so they don’t realize that is it going to be hard, so I think that it is better to have realistic.

Another therapist commented about the need for a combination room:

... It would be great if you had a gym and practice apartment together.

**Theme 2: Intersection of Environment and Intervention Strategies**

The therapists felt that a welcoming therapy environment is critical in empowering the client to engage in rehabilitation. They came to the conclusion that if the rehabilitative environment was filled with familiar occupational items, it would entice the client to participate in their own care, improve motivation, and decrease their passivity, thus leading to client-centered care. The therapists mentioned that the environment would potentially influence not only the behaviors of the client but also the intervention preferences of the therapist.

As the therapists reflected on how they made intervention decisions, they shared that the equipment in their physical environments dictated the tasks they completed with their clients and sometimes interfered with their ability to offer opportunities to participate in occupations. The therapists reported that before each session, they would visually scan the therapy environment, process each client’s goals, and see if there was a match between the equipment available and goal. One therapist
described how convenience influenced her clinical reasoning: she noted that she “... matched need to what I have at my finger tips that is going to be efficient for me to use.”

Ironically, the therapists spent extended time discussing how they would set up a home-like environment and how important the environment was in therapy but had difficulty in identifying what stopped them from using the current simulated home-like practice apartment, located in the basement of their facility. Therapists were asked about their use of the home-like practice apartment since one was available for them to use. Time and location were identified as the biggest hindrance to using this home-like practice apartment. In this facility, the practice apartment is located a floor below the inpatient units. Therapists found it easier to use the more conveniently placed therapy gym located on each of the units. They reported several factors interfering with their use of the practice apartment: 30-minute intervention sessions, time to walk there, pressure from insurance companies to demonstrate physical improvement in impairments, and pressure to maximize reimbursement. A therapist commented:

It doesn't seem like it would be that far but by the time you get the key, go on the elevator, get them down, unlock, I know it just seems like it’s a lot.

Further questions were asked of the therapists to identify if they would extend their therapy session to accommodate for the time issue. Therapists commented:

I think it is feasible but I don’t know [pause] it’s not convenient [going to the practice apartment].

Cuz with speed [need to be fast] you always go back to things you’re comfortable with or upper extremity exercises, endurance groups because it’s easy and quick and it’s helpful

The therapists realized that practicing in the therapy gym limited their potential to serve the occupational needs of the client. As one commented:

It makes us much more component based ... because the equipment is component-based.

**Theme 3: Professional Identity and Environment**

The therapists in all the focus groups believed that having a more simulated home-like environment, including equipment that supported the practice of occupations, would facilitate improved expression of the particular expertise and skills that the occupational therapist brings to the client, their family, and the rehabilitation team. During the key informant discussion group, the therapists shared the view that using a component-based approach supported by the therapeutic environment blurs the role of the occupational therapist because occupational and physical therapy look similar to clients and families. As one therapist commented:

I think that we use the same equipment; we do look like we are the same.

Still others felt if we use occupations as our interventions, it would make a difference.
If we start pushing in more of the occupational environment or the engagement in occupations during the therapy I think it would set us apart.

The occupational therapists reported that they worked on different skills than the physical therapists but since much of this occupation-based therapy was done behind closed curtains/doors in a client’s room, other team members and families did not develop an understanding of what occupational therapy had to offer. They believed that if more people saw what they did routinely with the client, there would be greater appreciation of the benefits of occupational therapy. All of the therapists interviewed felt it was very important for clients and their family to understand what occupational therapy has to offer and how it prepared the client for their return home. One therapist noted that:

It gives us more of a role, you know, where people actually identify what we all do ... if they saw us using more [occupation-based] equipment they might get a feel of more respect for what we do.

Some therapists in all the groups were concerned about insurance reimbursement and that, if roles are not clearly differentiated, referrals could inappropriately be made to physical therapy. As one stated:

But if people aren’t aware of what we do as OTs then we are just shuffled to the back corner or PT can pick that up and unfortunately it happens more and more every day even in our own institution.

**APPLICATION TO PRACTICE**

After completion of the analysis of the focus groups, an attempt to clearly describe the relationship of environment and intervention in an inpatient rehabilitation facility was undertaken. A conceptual matrix that explicitly connects the OTPF and PEO may allow for useful clinical use. Specifically, findings from the focus groups led to the development of the concept of an environmental spectrum and confirmed the complexity of the environment/intervention relationship. It is not unusual for inpatient rehabilitation units to be like a gym. While the therapists acknowledged the need for the gym setting for certain clients and for certain goals, it was clear that a more flexible environment that provided for a spectrum of care would allow for better, ultimately more occupation-based client-centered practice. As the focus group data revealed, therapists believe the environment influences not only how the client understands their therapy but also how the clinician makes clinical decisions. The physical environment was a powerful component of the therapeutic process.

Therapists’ use of occupation-based interventions is designed to facilitate engagement in client-directed occupations that achieve identified therapeutic goals. As identified by the occupational therapists, the environment in which they provide therapy (therapy gym, combination room, or home-like practice apartment) can influence the interventions available and chosen. This disconnection between theory and practice is not a new concern. Sass and Nelson (1998) recognized the productivity pressures that occupational therapists often face in a rehabilitation setting and suggested developing a format to illustrate the actual application of
TABLE 1. Physical Environment–Occupational Intervention Matrix

<table>
<thead>
<tr>
<th></th>
<th>Gym</th>
<th>Combination</th>
<th>Naturalistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparatory</td>
<td>Scenario A: therapy entails</td>
<td>Scenario B: sessions include</td>
<td>Scenario C: therapy focuses on</td>
</tr>
<tr>
<td>method</td>
<td>sitting edge of mat and</td>
<td>folding and hanging clothes on a</td>
<td>gathering clothes from closet</td>
</tr>
<tr>
<td></td>
<td>reaching; exercises to</td>
<td>rack in a gym; medication</td>
<td>and dressing in a room;</td>
</tr>
<tr>
<td></td>
<td>improve static and</td>
<td>management activity and</td>
<td>grooming at sink;</td>
</tr>
<tr>
<td></td>
<td>dynamic balance; and</td>
<td>picking up objects off the</td>
<td>cooking and cleaning</td>
</tr>
<tr>
<td></td>
<td>stretching</td>
<td>floor with a reacher</td>
<td></td>
</tr>
<tr>
<td>Purposeful</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>activity</td>
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<tr>
<td>Occupation-</td>
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theory into practice. Skubik-Peplaski, Paris, Boyle, and Culpert (2009) have identified that therapists struggle to apply the OTPF in practice especially in terms of offering occupation-based approaches.

The matrix in Table 1 attempts to connect the OTPF and PEO in a clinically useful way, while providing an original perspective on occupational therapy practice as seen in different inpatient environments. By merging the frameworks, three types of occupation-based interventions (preparatory, purposeful, and occupation-based) with common inpatient environmental options (gym, combination, and simulated home-like), the matrix provides an illustration of how person, environment, and occupation actually intersect in a clinical setting.

The concepts have been merged to create the Physical Environment–Occupational Intervention Matrix (PEOIM). This matrix fits in the occupational performance area of the PEO model representing the point of intersection of these three concepts. The matrix provides a way to connect an environmental spectrum more concretely to the suggested OTPF types of interventions.

The Physical Environment–Occupational Intervention Matrix

The matrix organizes a spectrum of inpatient environments and OTPF-suggested practice interventions that can be utilized after the client and therapist have worked together to establish meaningful goals. Through the intersection of environment and intervention, the client and therapist form a goal, then start intervention with the therapist constantly assessing the most effective environment and intervention. This process allows for the therapist and client to move from one environment to another as they transition among the three types of occupational therapy interventions as appropriate for each client. The variety of environment and type of practice can vary by time of a therapy session (beginning to end), the time of intervention (stage of diagnosis), or the stage of therapy (inpatient to outpatient). The matrix
is flexible enough to include all diagnoses, all stages of disease, and any stage of rehabilitation. The point is to always keep in mind that the environment can have a strong influence on the types of interventions used.

The purpose of the matrix is to concretely draw attention to and incorporate the environment in the therapeutic process. At this point, the matrix is purely descriptive, as research has not been conducted to explore the different connections illustrated. Theoretically, the matrix could be used by a therapist as a tool to assess their service provision and to help coordinate the client’s goals and abilities with the therapy intervention plan. There are a multitude of ways through which the therapist/client dyad may connect environment and intervention. This may look quite different by diagnosis or stage of recovery but still provides a conceptual framework for therapeutic decision-making that allows for optimal client-centered practice.

**Case Study Example**

The matrix can be illustrated through the case of Joe, a 65-year-old male who has had a right-hemisphere stroke with left hemiparesis. Upon entering a rehabilitation hospital, Joe sets an occupational therapy goal of improved upper body dressing. He begins therapy in the gym sitting on the edge of a therapy mat and reaches for objects in all movement planes. Due to his physical impairments, Joe’s occupational therapist started his intervention with preparatory methods. These preparatory methods are the precursor for the client to be able to dress himself and often occur in the therapy gym. In this process, there is the possibility that the preparatory activities will take place in a combination type of environment, or even a simulated home-like environment, but most likely they will occur sitting on a mat in the gym. The therapy gym is primarily associated with preparatory methods due to the presence of equipment (weights, rickshaw, mat tables, upper extremity bicycle, etc.) for physical rehabilitation. This environment is quite supportive for the use of preparatory methods and may in fact be one of the safest environments for these interventions (see Table 1, Scenario A).

A second component of Joe’s therapy is working on purposeful activities. This may take place in any of the environments, but it can be conceptualized that this stage of therapy may be most effective in a gym-like setting with home-like objects (combination area). For example, Joe may be in the combination area using a reacher to access a shirt hanging from a coat rack (see Table 1, Scenario B). Purposeful activities may occur in all three environments as the client simulates the practice of their desired occupations making it the most flexible of the interventions in terms of environmental needs.

Along with the preparatory and purposeful techniques, using an occupation-based intervention, Joe may also retrieve clothes from his own closet and dress in his hospital room. Occupation-based interventions may be best supported in a more natural setting (see Table 1, Scenario C). As demonstrated through the matrix, the therapist has the choice of three types of environments and three types of interventions. It is crucial to allow for flexibility in treatment to provide the best client-centered intervention versus relying on habit or convenience as the driving force behind therapist decision-making. At this point, the matrix illustrates the
options available to therapist in inpatient rehabilitation. Future research is needed to identify optimal use of each type of environment and each level of intervention.

**DISCUSSION**

The connection of environment and intervention is complex and multifaceted. The issue of professional identity is separate from the idea of health outcomes but presents a valid concern related to environment and intervention in practice. In the focus groups, the occupational therapists expressed concern that their roles were blurred and ill defined when they provided therapy in the gym. They realized that by providing preparatory methods in the gym, the client might recognize them as a rehabilitation professional but not necessarily as an occupational therapist. The occupational therapists also felt that, if they provided occupation-based intervention in a more natural environment, the client, family, and rehabilitation team developed a much clearer understanding of their role and value. Said another way, the therapist that provides stretching on a mat in the gym could be from a variety of health professionals, but the therapist facilitating a client’s ability to play guitar in the garden would clearly be the occupational therapist.

The focus groups revealed that, as far as these therapists were concerned, the rehabilitation environment had an influence on aspects of their practice. Environments that supported occupational performance facilitated client participation and goal attainment by allowing the client to practice the home-like skill. The environment has the ability to create a needed context for occupation and occupational therapy (Christiansen & Townsend, 2004). The data collected resulted in the creation of a matrix that addresses the complexity faced by therapists in providing appropriate, occupation-based, and client-centered care. By acknowledging the importance of the therapy environment and considering the intersection of occupational interventions and environment, therapists may move beyond habit and convenience to offer different options for inpatient rehabilitation occupational therapy. The end result is enhancing the professional identity of occupational therapists in the eyes of the client and the rehabilitation team as well as providing optimal client-centered care (Baum & Baptiste, 2002). It is unsurprising that the more a therapist can provide the environment an individual needs for optimal occupational therapy, the better the client-centered practice and more likely that a positive rehabilitation outcome will result.

While it is widely acknowledged that environment is important in occupational therapy, little research has been conducted to provide empirical insight into the link between the specific features of the environmental context and the effectiveness of the client/therapist interaction. Such insight provides useful direction to therapists as they seek to increase their effectiveness in client health and quality of life outcomes. This was a first step toward exploring and elucidating the relationship with the future goal of providing concrete, best practice results that can be translated to intervention quickly and clearly. Rehabilitation therapy gyms may not be as supportive as needed to foster the use of occupation-based interventions if used exclusively. On the other hand, more natural environments may not be necessarily the best settings for the preparatory aspects of occupational therapy intervention. If therapists view the environment as a spectrum of choices that coincides with the
OTPF interventions, they may be able to better match the occupation being used to the most effective space available to increase the client’s participation and ultimately contribute to the enhancement of occupation-based practice. The main point is that the role of the environment should not be relegated by the therapist to the level of convenience, time constraints, or habit. It is an important factor that should be carefully assessed with each and every client. In the future, research findings may provide the support needed for inpatient rehabilitation facilities to more clearly focus on the therapeutic environment they offer and to influence the choices of environments available to clinicians.

CONCLUSION

Any study has limitations. This one involved participants from one rehabilitation facility, a principal investigator who works on a daily basis with the participants, and participants who were among their peers in the focus groups. This could bias the findings by shaping or constraining the comments of the participants. On the other hand, familiarity with the participants, and with their practice setting, may have generated a level of comfort that facilitated an open sharing of ideas and perhaps a more in-depth understanding of the issues. The specific information derived led to the development of a conceptual matrix for guiding the occupational therapists’ understanding and therapeutic use of environment over the course of a therapy trajectory. The PEOIM provides the scaffolding for empirically addressing an array of significant questions for future research. What is the optimal environment for the performance of each type of occupational therapy intervention: preparatory, purposeful, and occupation-based? How does the environment influence clinician decision-making and practice? What is the best method to measure the influence of environment and treatment decision-making on client outcomes? The influence of environment on occupational performance and occupational therapy is important and needs to be more fully described and defined. If the occupational therapy profession continues to challenge therapists to use occupation in practice, there is a need for therapy environments to facilitate this focus.

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REFERENCES


