



The Design of Psychologists' Offices: A Qualitative Evaluation of Environment-Function Fit

Abstract

Psychologists' offices have been largely absent from contemporary theoretical and methodological discussions of therapeutic environments. Research on environmental stressors, healing environments, psychiatric facilities, and the transactions between a psychologist and client during a therapy session suggest that psychologists' offices are significant for the psychologists who work there daily and the clients who visit them.

To address the gap in the literature, we examined the relationship between psychologists and their office environments in an exploratory, qualitative study using interviews and projective measures. Projective measures included cognitive mapping exercises and photographs taken of the psychologist's and client's views of each office. We interviewed 10 licensed psychologists about how they perceived—and how they believed their clients perceived—their office environments.

Content analyses of the interviews revealed that the environmental responses psychologists used in their office designs met the needs imposed by therapeutic transactions. In addition, environmental responses helped psychologists adapt difficult spaces to the ongoing needs of therapy. Implications include design recommendations for psychologists and designers. The training of psychologists also should give greater consideration to office design. Sensitivity to office design could differentiate psychologists from their competitors. This is especially important in contemporary healthcare, where healing designs offer a competitive advantage.

Researchers have investigated the therapeutic value of institutional healthcare environments such as hospitals and Alzheimer's facilities in fostering positive medical outcomes and recovery from stress (McCormick and Shepley 2003). Several researchers have discussed the lack of research about psychologists' offices (Anthony 1998; Anthony and Watkins 2002a; Anthony and Watkins 2002b). Experimental research lacks external validity because actual psychologists, psychologists' offices, and clientele have not been used (Miwa and Hanyu 2006). As such, psychologists' offices have been largely absent from contemporary theoretical and methodological discussions of therapeutic environments.

Psychologists recognize that their clients suffer from stressors related to mental illness and daily routines. Clients also suffer stress from making a life transition involving discomfort and disclosure of private information within an unfamiliar setting (Demick and Andreoletti 1995; McLoughlin 1995; Spivack 1984). Consequently, how, if at all, do psychologists believe that their office designs contribute to the therapeutic process? How do psychologists compensate for the inadequacies of their therapeutic environments? Answers to these questions could guide future research on and design of psychologists' offices.

Environments for the treatment of mental illness

When an imbalance exists between the demand posed by a stressor and a person's perceived resources to adaptively respond to the stressor, stress occurs (Stokols 1979; Stokols et al. 2000). A stressor might overwhelm a person's physical and psychological resources and, as a result, cause a person to feel incompetent (Stokols et al. 2000). Evans and McCoy (1998) identify negative, stressful experiences resulting from the relationship between physical environments and a person's psychology. These concepts include

overstimulation resulting from crowding and ambiguous spatial configurations.

Researchers and designers have long expressed interest in creating healthcare environments that mitigate stress. Healing gardens, views of nature, and legible building plans and signage have been well documented as design features that contribute to positive psychological and physiological health (Evans and McCoy 1998; Ulrich 1999; Ulrich et al. 2003).

Researchers have extensively investigated institutions such as psychiatric facilities and their possible negative effects on mental health. Their research reveals that the design of a psychiatric facility can reinforce rigid social programs and patterns of behavior among patients and staff (Bechtel 1997; Goffman 1961; Schefflen 1965; Stevenson 2000). Consequently, the design of an institution reflects its philosophy of care (Bechtel 1997; Stevenson 2000; Williams 1994). For instance, in the 19th century, Thomas Kirkbride designed mental hospitals for the humane treatment of patients. His designs required one room for each patient, double-loaded main corridors, wards terminating with sunlit bays, and access to natural settings (Good et al. 1965; Sachs 1999).

Critics warn that the physical designs of many mental institutions exacerbate patients' conditions. Fortress-like facades reinforce the larger community's stigma of the mentally ill (Ittelson et al. 1970; Stevenson 2000). Commons areas equipped with fixed seating inhibit social interaction (Osmond 1957; Sommer 1969). Spaces efficient for staff, such as radial plans and long corridors lined with easy-to-clean surfaces, convey a sense of sterility and distort patients' already disturbed perceptions with illusions and glare (Ittelson et al. 1970; Spivack 1984). Ironically, the design of mental institutions can undermine the competence of the patient, thereby worsening the patient's illness (Moos 1973; Timko et al. 2000).

Similarly, a psychologist's office both communicates and facilitates communication. People imbue the environment with psychosymbolic meaning formed through interactions with the environment (Lawrence and Low 1990). Likewise, office features and psychologist-client transactions have psychosymbolic importance. Obvious symbolic cues include artwork, desks, and diplomas (Pressly and Heesacker 2001). Less obvious forms of communication include those physical features that reflect the psychologist-client transaction and those integral to treatment and diagnosis. In general, the therapeutic setting should be a holding environment; psychologists and their offices should provide comfortable and secure environments within which clients feel free to communicate sensitive information (Saari 2002; Winnicott 1986).

Clients and psychologists communicate through transference relationships (Wachtel and Messer 1997; Saari 2002). Horvath and Lubrosky (1993) state that a transference "implies that emotions and thoughts associated with the unresolved relationships with significant others are bound to be displaced (transferred) onto the relationship with the therapist" (p. 562). Transferences are imbued with feelings that the client and psychologist hold for each other and for inanimate objects (Winnicott 1953). From positive transferences, the psychologist and client develop a "working alliance" to relieve the client of distress (Pipes and Davenport 1999; Horvath and Lubrosky 1993).

Saari's (2002) concept of interpsychic space is the nonverbal, spatial expression of positive and negative transferences through proxemics and personal space. For Stern (1997), an interpersonal field opens a context for disclosure between a psychologist and a client. Similarly, Satir (1964), Shefflen (1973), and Sommer (1969) have all demonstrated that in mental health settings, clients communicate psychological states nonverbally with seating arrangements and the manipulation of nonfixed physical features. Psychologists can influence transferences through their intentional manipulations of space. For instance, Henry Stack Sullivan sat

across a desk from his schizophrenic clients because such an arrangement focused their attention on therapy (Goodman 1962).

Psychologists record transferences with the physical manipulation of their therapeutic environments. In the process, psychologists use space to treat and diagnose clients. Klein (1949) used play therapy with children so that transferences between psychologist and client were expressed through toys. Lowenfield adapted Klein's play therapy to trays of sand. Play with sand trays enabled a healing connection with natural elements, while helping the psychologist reach a diagnosis (Mitchell and Friedman 1994). Peled and Ayalon (1988) analyzed attachments to home as part of family therapy.

As is the case with other therapeutic environments, psychologists' offices must also alleviate and adapt to stressors. Psychologists' offices should convey holding environments within which psychologist-client transactions are accommodated. Also, they should empower psychologists to perform transactions necessary for maintaining a holding environment. Therefore, they should provide psychologists with the resources necessary to adapt to the ongoing needs of therapy.

Environment-function fit

A traditional measure of compatibility between an environment and the activities performed within is environment-function fit (Alexander 1970; Sherrod and Cohen 1982). A derivation of environment-function fit, person-environment congruency measures the relationships between a person's perceptions and the demands exerted by a sociophysical environment (Lawton 1989). Researchers have applied person-environment congruency to measure fit between the elderly and nursing home facilities and the mentally ill and psychiatric facilities (Kristoff 1996; Lawton 1989; Moos 1973; Timko et al. 2000). Lawton theorized that congruency occurred when a demand fell into a person's perceived competency to meet that demand. If so, either a person's perceived control or actual control over the demand increased.

The built environment is a resource that people use to exert control over demands and increase competency (Alexander 1970). Flexible environments made of nonfixed features can create greater opportunities for fit (Lang 1987). At the other extreme, negative fit decreases competency (Alexander 1970). Lower competency also results in decreased performance, increased stress, negative affect, and a lack of control (Lawton 1989).

Just as stress exacerbated by the environment of mental institutions and other therapeutic environments reduces the competency of users, we suggest that the design of a psychologist's office provides a resource for mastery over the demands of psychotherapy. Therefore, environment-function fit could be a paradigm for understanding psychologists as users of design, and consequently, the function of design in psychologists' offices.

Methodology

Participant sample

Ten psychologists agreed to participate in a study of their office environments under the condition that clientele were not to be included or discussed. Participants were all: (1) licensed counseling or clinical psychologists; (2) employed in private practice or by a healthcare facility; (3) practicing within the city where the researchers were located. Subjects varied in psychotherapeutic philosophy from psychoanalytic to cognitive-behavioral. Six had a private practice, and four worked for a healthcare facility.

The sample's composition conformed to principles of strategic nonrepresentative sampling formulated by Trost

(1986) and used in prior research of built environments (Gustafson 2001). Nonrepresentative sampling allows researchers to determine a sample reflective of the breadth of the topic under study without overrepresentation by any one characteristic of the sample. Each psychologist represented one private practice or healthcare facility. Conveniently, this prevented overrepresentation from any facility.

Procedures and measures

The exploratory nature of the study and the sample size warranted an antipositivistic research approach emphasizing on-site research, richness of data, smaller sample size, less emphasis on generalizability, and identification of contextual factors and information specific to each subject's unique experience (Mazumdar and Geis 2001; Mazumdar 2002).

Interviews were conducted within the therapeutic setting so that the researchers could see firsthand and discuss the unique design features of each office and so that psychologists could describe their offices in detail.

Researchers used techniques of questioning described by Carspecken (1996) and Kvale (1996): specifically, descriptive questions, nonleading leads, and low-inference paraphrasing. After each interview, the researcher and psychologist reviewed the topics discussed on the interview guide to assess verification between the researcher's and psychologist's interpretations of questions (Carspecken 1996). Such "member checking" ensured the "trustworthiness" and validity of the data (Lincoln and Guba 1985). All interviews were transcribed verbatim.

Analyses

Grounded theory was used to identify categories within each interview and across interviews (Mazumdar and Geis 2001; Strauss and Corbin 1998). The diversity of the sample controlled for theoretical sampling, during which collection and analyses of data coincide to fill gaps in the data revealed during analyses (Noonan et. al. 2004; Patton 1990). Extensive auditing ensured the dependability and confirmability of the results (Lincoln and Guba 1985). Concepts representing discrete parts of the interviews emerged through a process of open coding. Then, concepts were synthesized into larger categories. Axial coding further synthesized categories and revealed dimensions ("not valued" to "highly valued"). Also, axial coding identified connections between categories, revealing novel interpretations of the data. Selective coding isolated two core categories as nuclei of the subjects' experiences. Theoretical redundancy and saturation were achieved when the subjects' transcribed interviews failed to generate categories beyond those already existing from the analyses. To assess the reliability and validity of the categories, the researchers asked an impartial, independent researcher—blind to the analyses and the coding of the categories—to code random samples from the transcripts.

Results

The content analysis produced two core categories important to the design of psychologists' offices. Consistent with theories of person–environment congruence, categories of needs and responses emerged (Kristoff 1996). As shown in **Table 1**, the first category included therapeutic needs identified by the psychologists, i.e., criteria that they believed were necessary for successful psychotherapy. The second category consisted of environmental responses that psychologists implemented in response to therapeutic needs. Both the therapeutic needs and environmental responses express psychologists' desire to accommodate their clientele and relieve stressors imposed by therapy. All 10 psychologists stressed the importance of therapeutic needs but differed with respect to what environmental responses were highly valued in meeting those needs.

Table

Categories of Environmental Responses

Environmental Responses	Number of Psychologists Who Highly Valued Each Environmental Response
Clocks	10
Lighting: Natural and Artificial	10
Proxemics	10
Seating	10
Windows	10
Color	9
Staffing	9
Thermal Comfort	9
Gender Friendly Décor	8
Location	8
Noise Control	8
Non-fixed Features	8
Room Size	7
Plants	6

Table 1. All 10 psychologists identified several therapeutic needs as well as environmental responses to meet those needs. The value placed on each environmental response varied by psychologist.

Therapeutic needs included practicality, control, cueing of appropriate social roles, security, comfort, adaptability, privacy, order, and empathy. Environmental responses to therapeutic needs consisted of clocks, lighting, proxemics, seating, windows, color, staffing, thermal comfort, gender-friendly décor, location, noise control, nonfixed features, room size, and plants. If environmental responses could not be met adequately, psychologists adapted the best they could. They valued therapeutic spaces that were flexible.

Psychologists stressed that their offices needed to be both economical and functional. Many of the therapists engaged in private practice shared an office space with a colleague to cut the cost of rent. The functional necessities of an office were illustrated by a case where the office did not accommodate the special needs of a psychologist with a disability. The psychologist adapted to the space by placing all furniture to the exterior of the room and turning drawers into desks.

Many psychologists expressed a strong need for control. Psychologists seek not only to have a sense of control of their clients but also control of the context for therapy. As a consequence, all psychologists interviewed described design strategies purposefully implemented for therapy sessions. Most design strategies consisted of controlling what people could or could not see. Psychologists spoke of positioning clocks and how it was important that clients could or could not see them. Psychologists managed to divvy up the counseling room into multiple visual fields by privileging themselves with views that only they could observe.

For example, some therapists had images of personal significance mounted on the wall above their clients' heads. These images were intentionally mounted in such a manner so the client would not notice them. One psychologist intentionally located his offices on the second floor of a building because all the windows on that level were reflective. The tint and reflectivity of the windows prevented individuals on the street from seeing a therapy session in progress.



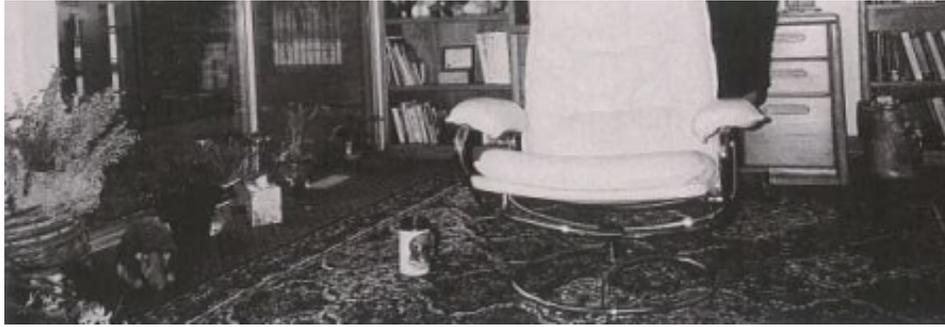
In this psychologist's office, clients can see out, but outsiders cannot see in due to the reflective windows. This helps protect clients' privacy.

Diffuse spot lighting was a common technique used to focus a session and encourage clients to disclose sensitive information. Floor lamps lit up corners and framed seating areas during later hours.

A clear need for all psychologists was that an office communicates the appropriate social scripts necessary for a successful therapeutic session. In this regard, the design of psychologists' offices varied according to the guiding philosophy and associated social role of each psychologist. Psychologists who were inclined to take a psychoanalytic and humanistic philosophy offered seating that was warm and comforting. In addition, psychologists made an effort to imply that the psychologist-client relationship was that of a team. The psychologist did not sit any higher than the client, and both often sat in similar seats with the psychologist's chair facing the client. Yet on occasion, stepping outside the designated social roles implied by the design of the therapeutic setting did have its consequences:

“A client picked the hard, straight-back chair. So I fell into the beanbag chair, and it really, really upset her.”
(Psychologist No. 5)





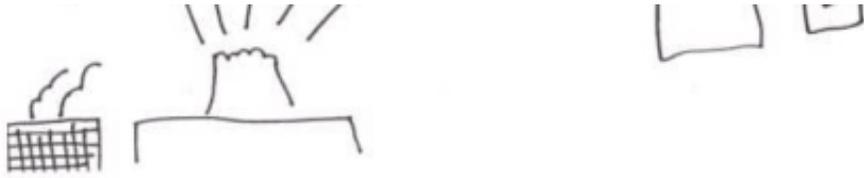
Client's view of the psychologist's office. Note the full-length view of a private garden, making this by far one of the most user-friendly office environments for both therapist and clients

Psychologists had to rely on security methods when presented with a potentially harmful client. A common measure used to mitigate a confrontation between a psychologist and a client was to provide an easy means of egress for clients in case they became upset. Also, psychologists placed their chairs away from the path leading to the doorway, believing that anxious clients felt comforted by having a clearly defined exit.

Psychologists emphasized a desire to keep a client's attention on the session at hand. Windows were beneficial in anchoring a client to the therapeutic setting by offering natural views onto greenery. Even though psychologists favored having the natural light from a window looking onto a street or sidewalk, they listed drawbacks such as sporadic cars and passersby diverting a client's focus. In addition, windows looking out onto public areas threatened the privacy of clientele. As a result, many psychologists kept blinds drawn over their windows, causing offices to be dimly lit. One psychologist avoided such problems with the use of clerestory windows.

Plants and small items were also used to keep the client focused on the therapy session at hand. Two female psychologists catering to a female clientele displayed collections of figurines and stuffed animals. Male psychologists often presented gender-neutral objects and those reflecting sporting interests such as photographs of motorcycles and bicycles and prints of natural scenery. Many psychologists emphasized the need for an office with a warm, home-like appearance—comfortable chairs, framed pictures, wood shelving, plants, soft colors, and lamps.





A psychologist's visual image of her office. It featured the comfort associated with a homelike interior.

Thermal conditions of a therapeutic space were often troublesome. Many psychologists struggled with thermal control when neighboring businesses shared the same thermostat. Certain seasons and times of day when window exposures were hit hard by the sun caused overheating and discomfort. One psychologist used a space heater to compensate for the drafty winter air leaking through his windows.

Psychologists favored spaces with neutral colors, believing that these had a calming effect. Creams and whites were common. Carpets often were soft green or maroon. Shelves and furniture were often made of stained wood and upholstered with patterned fabrics.

One of the most critical needs for psychologists' offices was the ability to adapt to ongoing change. Whether moving into a new office or taking on additional clientele (in, say, shifting focus to family therapy), psychologists required spaces that would easily respond to their needs. In new offices, places to sit had to be negotiated to accommodate previously practiced social roles. If necessary, a few psychologists were even willing to rearrange furniture for specific clients. Flexible, sizable rooms were favored in this regard.

Privacy was another need that psychologists felt their office environments should reflect. Many offices had their own adjoining waiting rooms. Some psychologists staggered appointments with those of their colleagues so that clients would not run into each other. Psychologists who shared offices with other units in mental health centers or other businesses in an office building often could rely on anonymity to protect any given client's privacy:

"Having our own waiting room is certainly a privacy issue. But the location of the office is not as much of an issue [because] it's a building that has a variety of businesses in it. Anyone coming into the building isn't necessarily seeing a therapist." (Psychologist No. 2)





This busy intersection was adjacent to a mental health facility. Clients had to park on one side of the intersection and then wait to cross. Psychologists felt it overexposed clientele and threatened confidentiality.

Psychologists often cited noise as a threat to privacy. They complained of thin walls and hollow-core doors that bled conversations through to the adjoining waiting room. They used radios and indoor water features to provide white noise. Insulated interior walls and those constructed with concrete or brick were effective.

Psychologists believed that their clientele already dealt with too much chaos outside of the therapeutic setting. Accordingly, most believed it necessary to keep their offices in good order for therapy sessions. However, psychologists in both administrative and counseling positions who accumulated large volumes of paperwork often found it difficult to portray a sense of order. Some of their desks conveyed a sense of disorder and disarray.



In this office, the client's view consists of the psychologist's computer and a messy desk. This office also lacked windows.

Often, psychologists made their empathetic intentions clearer by displaying positive images on walls for a client's easy view, maintaining a comfortable proximity in relation to the client, maintaining healthy plants, and showcasing items such as signs with healing phrases and small angel statuettes. The cumulative effect of satisfying all the needs listed above was that of an empathetic and caring holding environment—one reflecting

a psychologist's desire to foster positive therapeutic transactions with clientele.

Conclusion and discussion

This study explored psychologists as users of design with an environment-fit paradigm. Its goal was to identify ways in which psychologists use their offices to reinforce their competency and control over therapeutic transactions with clients. In-depth interviews and content analyses revealed that physical features of psychologists' offices provide resources for what psychologists perceived were their own needs as well as those of their clients. Several environmental responses facilitated the meeting of needs and, in turn, a fit or congruency between an office and a psychologist.

Given the importance of physical features in the designs of psychologists' offices to meet therapeutic needs, designers and researchers should expand upon the repertoire of healthcare environments to include psychologists' offices. Such an enhanced definition would accommodate issues unique to psychologists' offices and allow comparisons between psychologists' offices and other therapeutic environments.

Psychologists whose offices did not meet their needs perceived these spaces as satisfactory for their clientele but not ideal. Most of the psychologists were housed in office space that they defined as less than ideal for therapeutic transactions. Consequently, relationships between therapeutic needs and environmental responses fluctuated. For example, some offices were too small and required rearrangement of furniture to suit the demands of an upcoming therapy session.

Psychologists considered certain design features prerequisites for a healthy, therapeutic environment and for positive outcomes among clients. The important physical features of psychologists' offices were analogous to those identified by Evans (2003) for most therapeutic settings and those suggested by Pressly and Heesacker (2001) and Goldstein (1998) specific to psychologists' offices. For example, psychologists believed that a quiet environment, control over the design of the office, views of nature including water and trees, indoor plants, and landscape paintings were restorative, reduced stress, and facilitated therapeutic transactions. Fluorescent lighting should be avoided as it leads to clients' discomfort and anxiety. Abstract works of art whose content is deliberately ambiguous and can be subject to potentially negative interpretations should not be displayed (Ulrich 1999). Comfortable seating arrangements must meet proxemic requirements but not be so comfortable as to induce sleepiness. Several psychologists preferred neutral colors so as not to provoke anxiety associated with vibrant colors such as red and orange.

In most cases, psychologists' offices engaged clients' sense of vision. Consequently, the designs of many offices were underused as tactile, auditory, and olfactory components within treatment and diagnosis. In contrast to Klein (1949), the physical design of psychologists' offices was also underused as an indicator of transferences. Consistent with prior literature, many psychologists would use the nonverbal behaviors of clients' seating habits as indicators of a therapeutic session's progress (Saari 2002; Satir 1964; Shefflen 1973). One cognitive-behavioral psychologist used a dinner table around which he and his clients sat to fill out tests and negotiate homework tasks. Another used clients' attachments to stuffed animals as indicators of unconscious, underlying feelings. However, treatment and diagnosis were usually relegated to talking and sitting, not playing or acting.

Psychologists must recognize the discrepancies between their own viewpoints of their offices and those of their clients. Their photographs and drawings revealed that they and their clients have dramatically different perspectives of the same office. Many psychologists had views of bookshelves and framed images, while clients faced a blinking computer screen and a desk cluttered with paper. Many of the psychologists were not

aware of this discrepancy between viewpoints until they were asked to take the client's perspective.

The dynamics between therapeutic needs and environmental responses varied depending upon whether the psychologist was engaged in private practice or was a team member of a consortium or a mental health center (Luhrman 2000). For example, many large healthcare facilities frequently relocate their counseling departments to accommodate the changing needs of other departments. As a result, counseling offices are often housed in windowless basements and cramped quarters.



This plan for a hypothetical Psychological Services Center at a university shows clear separation between the research staff, support, and therapeutic areas. It allows clients to exit inconspicuously after therapy without parading through the waiting room and allows therapists and research staff to circulate without clients seeing them. Privacy concerns like these are paramount and must be integrated sensitively into the design of therapeutic environments.

Source: Cannon Design Healthcare Design Studio participants Coral Brandt, Jill Kirchherr, and Selwa Nadhimi

Psychologists' offices serve as workspaces laden with the territoriality and symbolism associated with other office environments (Joiner 1971; Sundstrom 1986). Ironically, some mental health facilities force psychologists to work in deplorable offices that inhibit personalization and territoriality. Several psychologists spoke of dissatisfying internships in inadequate offices. Many recalled windowless rooms with little privacy. One psychologist recalled an internship spent in a former gynecologist's office. The psychologist was forced to meet clientele with a decrepit gynecologist's chair positioned in the center of the room. Whether they are clinicians at mental health centers, private clinicians, or interns, psychologists should receive some opportunity and adequate resources to select and design spaces for therapy.

Psychologists seem to take a trial-and-error approach when designing their offices. None of the psychologists interviewed had been taught how to design their offices. None used professional interior designers. Graduate schools of clinical and counseling psychology ought to train future clinicians on the importance of the office environment in the therapeutic process. Students could be informed about where to place lamps and clocks and how to personalize a space without intruding on a client's field of vision. Graduate training could address how and where to set up office environments with adequate views, lighting, and seating. Indeed, the discrepancies between clients' versus psychologists' viewpoints of psychologists' offices underscore that good design practices are not intuitive.

Conducting a qualitative study was advantageous given the exploratory nature of the research. Psychologists welcomed one-on-one interviews to discuss their offices, procedures that were compatible with those used daily when treating clients. In the future, the needs and responses revealed by the researchers in this study could be used in the development of a questionnaire.

Future research could isolate one specific need (e.g., privacy) or response and examine it in detail. Researchers could study the relationship between a specific therapeutic approach and the design of psychologists' offices. Further studies could focus specifically on either psychologists in private practice or those working for mental health centers. More important, future research can underscore that psychologists' offices are not only workspaces but also therapeutic environments affecting how well therapy might or might not be performed. In an era of competitive healthcare, clients who have a choice might gravitate to psychologists' offices that appear restorative and uplifting.

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Article

Researchers have investigated the therapeutic value of institutional healthcare environments such as hospitals and Alzheimer's facilities in fostering positive medical outcomes and recovery from stress (McCormick and Shepley 2003). Several researchers have discussed the lack of research about psychologists' offices (Anthony 1998; Anthony and Watkins 2002a; Anthony and Watkins 2002b). Experimental research lacks external validity because actual psychologists, psychologists' offices, and clientele have not been used (Miwa and Hanyu 2006). As such, psychologists' offices have been largely absent from contemporary theoretical and methodological discussions of therapeutic environments.

Psychologists recognize that their clients suffer from stressors related to mental illness and daily routines. Clients also suffer stress from making a life transition involving discomfort and disclosure of private information within an unfamiliar setting (Demick and Andreoletti 1995; McLoughlin 1995; Spivack 1984). Consequently, how, if at all, do psychologists believe that their office designs contribute to the therapeutic process? How do psychologists compensate for the inadequacies of their therapeutic environments? Answers to these questions could guide future research on and design of psychologists' offices.

Environments for the treatment of mental illness

When an imbalance exists between the demand posed by a stressor and a person's perceived resources to adaptively respond to the stressor, stress occurs (Stokols 1979; Stokols et al. 2000). A stressor might overwhelm a person's physical and psychological resources and, as a result, cause a person to feel incompetent (Stokols et al. 2000). Evans and McCoy (1998) identify negative, stressful experiences resulting from the relationship between physical environments and a person's psychology. These concepts include overstimulation resulting from crowding and ambiguous spatial configurations.

Researchers and designers have long expressed interest in creating healthcare environments that mitigate stress. Healing gardens, views of nature, and legible building plans and signage have been well documented as design features that contribute to positive psychological and physiological health (Evans and McCoy 1998; Ulrich 1999; Ulrich et al. 2003).

Researchers have extensively investigated institutions such as psychiatric facilities and their possible negative effects on mental health. Their research reveals that the design of a psychiatric facility can reinforce rigid social programs and patterns of behavior among patients and staff (Bechtel 1997; Goffman 1961; Schefflen 1965; Stevenson 2000). Consequently, the design of an institution reflects its philosophy of care (Bechtel 1997; Stevenson 2000; Williams 1994). For instance, in the 19th century, Thomas Kirkbride designed mental hospitals for the humane treatment of patients. His designs required one room for each patient, double-loaded main corridors, wards terminating with sunlit bays, and access to natural settings (Good et al. 1965; Sachs 1999).

Critics warn that the physical designs of many mental institutions exacerbate patients' conditions. Fortress-like facades reinforce the larger community's stigma of the mentally ill (Ittelson et al. 1970; Stevenson 2000). Commons areas equipped with fixed seating inhibit social interaction (Osmond 1957; Sommer 1969). Spaces efficient for staff, such as radial plans and long corridors lined with easy-to-clean surfaces, convey a sense of sterility and distort patients' already disturbed perceptions with illusions and glare (Ittelson et al. 1970; Spivack 1984). Ironically, the design of mental institutions can

undermine the competence of the patient, thereby worsening the patient's illness (Moos 1973; Timko et al. 2000).

Similarly, a psychologist's office both communicates and facilitates communication. People imbue the environment with psychosymbolic meaning formed through interactions with the environment (Lawrence and Low 1990). Likewise, office features and psychologist-client transactions have psychosymbolic importance. Obvious symbolic cues include artwork, desks, and diplomas (Pressly and Heesacker 2001). Less obvious forms of communication include those physical features that reflect the psychologist-client transaction and those integral to treatment and diagnosis. In general, the therapeutic setting should be a holding environment; psychologists and their offices should provide comfortable and secure environments within which clients feel free to communicate sensitive information (Saari 2002; Winnicott 1986).

Clients and psychologists communicate through transference relationships (Wachtel and Messer 1997; Saari 2002). Horvath and Lubrosky (1993) state that a transference "implies that emotions and thoughts associated with the unresolved relationships with significant others are bound to be displaced (transferred) onto the relationship with the therapist" (p. 562). Transferences are imbued with feelings that the client and psychologist hold for each other and for inanimate objects (Winnicott 1953). From positive transferences, the psychologist and client develop a "working alliance" to relieve the client of distress (Pipes and Davenport 1999; Horvath and Lubrosky 1993).

Saari's (2002) concept of interpsychic space is the nonverbal, spatial expression of positive and negative transferences through proxemics and personal space. For Stern (1997), an interpersonal field opens a context for disclosure between a psychologist and a client. Similarly, Satir (1964), Shefflen (1973), and Sommer (1969) have all demonstrated that in mental health settings, clients communicate psychological states nonverbally with seating arrangements and the manipulation of nonfixed physical features. Psychologists can influence transferences through their intentional manipulations of space. For instance, Henry Stack Sullivan sat across a desk from his schizophrenic clients because such an arrangement focused their attention on therapy (Goodman 1962).

Psychologists record transferences with the physical manipulation of their therapeutic environments. In the process, psychologists use space to treat and diagnose clients. Klein (1949) used play therapy with children so that transferences between psychologist and client were expressed through toys. Lowenfield adapted Klein's play therapy to trays of sand. Play with sand trays enabled a healing connection with natural elements, while helping the psychologist reach a diagnosis (Mitchell and Friedman 1994). Peled and Ayalon (1988) analyzed attachments to home as part of family therapy.

As is the case with other therapeutic environments, psychologists' offices must also alleviate and adapt to stressors. Psychologists' offices should convey holding environments within which psychologist-client transactions are accommodated. Also, they should empower psychologists to perform transactions necessary for maintaining a holding environment. Therefore, they should provide psychologists with the resources necessary to adapt to the ongoing needs of therapy.

Environment-function fit

A traditional measure of compatibility between an environment and the activities performed within is environment-function fit (Alexander 1970; Sherrod and Cohen 1982). A derivation of environment-function fit, person-environment congruency measures the

relationships between a person's perceptions and the demands exerted by a sociophysical environment (Lawton 1989). Researchers have applied person-environment congruency to measure fit between the elderly and nursing home facilities and the mentally ill and psychiatric facilities (Kristoff 1996; Lawton 1989; Moos 1973; Timko et al. 2000). Lawton theorized that congruency occurred when a demand fell into a person's perceived competency to meet that demand. If so, either a person's perceived control or actual control over the demand increased.

The built environment is a resource that people use to exert control over demands and increase competency (Alexander 1970). Flexible environments made of nonfixed features can create greater opportunities for fit (Lang 1987). At the other extreme, negative fit decreases competency (Alexander 1970). Lower competency also results in decreased performance, increased stress, negative affect, and a lack of control (Lawton 1989).

Just as stress exacerbated by the environment of mental institutions and other therapeutic environments reduces the competency of users, we suggest that the design of a psychologist's office provides a resource for mastery over the demands of psychotherapy. Therefore, environment-function fit could be a paradigm for understanding psychologists as users of design, and consequently, the function of design in psychologists' offices.

Methodology

Participant sample

Ten psychologists agreed to participate in a study of their office environments under the condition that clientele were not to be included or discussed. Participants were all: (1) licensed counseling or clinical psychologists; (2) employed in private practice or by a healthcare facility; (3) practicing within the city where the researchers were located. Subjects varied in psychotherapeutic philosophy from psychoanalytic to cognitive-behavioral. Six had a private practice, and four worked for a healthcare facility.

The sample's composition conformed to principles of strategic nonrepresentative sampling formulated by Trost (1986) and used in prior research of built environments (Gustafson 2001). Nonrepresentative sampling allows researchers to determine a sample reflective of the breadth of the topic under study without overrepresentation by any one characteristic of the sample. Each psychologist represented one private practice or healthcare facility. Conveniently, this prevented overrepresentation from any facility.

Procedures and measures

The exploratory nature of the study and the sample size warranted an antipositivistic research approach emphasizing on-site research, richness of data, smaller sample size, less emphasis on generalizability, and identification of contextual factors and information specific to each subject's unique experience (Mazumdar and Geis 2001; Mazumdar 2002).

Interviews were conducted within the therapeutic setting so that the researchers could see firsthand and discuss the unique design features of each office and so that psychologists could describe their offices in detail.

Researchers used techniques of questioning described by Carspecken (1996) and Kvale (1996): specifically, descriptive questions, nonleading leads, and low-inference paraphrasing. After each interview, the researcher and psychologist reviewed the topics discussed on the interview guide to assess verification between the researcher's and psychologist's interpretations of questions (Carspecken 1996). Such "member checking"

ensured the "trustworthiness" and validity of the data (Lincoln and Guba 1985). All interviews were transcribed verbatim.

Analyses

Grounded theory was used to identify categories within each interview and across interviews (Mazumdar and Geis 2001; Strauss and Corbin 1998). The diversity of the sample controlled for theoretical sampling, during which collection and analyses of data coincide to fill gaps in the data revealed during analyses (Noonan et. al. 2004; Patton 1990). Extensive auditing ensured the dependability and confirmability of the results (Lincoln and Guba 1985). Concepts representing discrete parts of the interviews emerged through a process of open coding. Then, concepts were synthesized into larger categories. Axial coding further synthesized categories and revealed dimensions ("not valued" to "highly valued"). Also, axial coding identified connections between categories, revealing novel interpretations of the data. Selective coding isolated two core categories as nuclei of the subjects' experiences. Theoretical redundancy and saturation were achieved when the subjects' transcribed interviews failed to generate categories beyond those already existing from the analyses. To assess the reliability and validity of the categories, the researchers asked an impartial, independent researcher—blind to the analyses and the coding of the categories—to code random samples from the transcripts.

Results

The content analysis produced two core categories important to the design of psychologists' offices. Consistent with theories of person-environment congruence, categories of needs and responses emerged (Kristoff 1996). As shown in Table 1, the first category included therapeutic needs identified by the psychologists, i.e., criteria that they believed were necessary for successful psychotherapy. The second category consisted of environmental responses that psychologists implemented in response to therapeutic needs. Both the therapeutic needs and environmental responses express psychologists' desire to accommodate their clientele and relieve stressors imposed by therapy. All 10 psychologists stressed the importance of therapeutic needs but differed with respect to what environmental responses were highly valued in meeting those needs.

Table

Categories of Environmental Responses

Environmental Responses	Number of Psychologists Who Highly Valued Each Environmental Response
Clocks	10
Lighting: Natural and Artificial	10
Proxemics	10
Seating	10
Windows	10
Color	9
Staffing	9
Thermal Comfort	9
Gender Friendly Décor	8
Location	8

Noise Control	8
Non-fixed Features	8
Room Size	7
Plants	6

Table 1. All 10 psychologists identified several therapeutic needs as well as environmental responses to meet those needs. The value placed on each environmental response varied by psychologist.

Therapeutic needs included practicality, control, cueing of appropriate social roles, security, comfort, adaptability, privacy, order, and empathy. Environmental responses to therapeutic needs consisted of clocks, lighting, proxemics, seating, windows, color, staffing, thermal comfort, gender-friendly décor, location, noise control, nonfixed features, room size, and plants. If environmental responses could not be met adequately, psychologists adapted the best they could. They valued therapeutic spaces that were flexible.

Psychologists stressed that their offices needed to be both economical and functional. Many of the therapists engaged in private practice shared an office space with a colleague to cut the cost of rent. The functional necessities of an office were illustrated by a case where the office did not accommodate the special needs of a psychologist with a disability. The psychologist adapted to the space by placing all furniture to the exterior of the room and turning drawers into desks.

Many psychologists expressed a strong need for control. Psychologists seek not only to have a sense of control of their clients but also control of the context for therapy. As a consequence, all psychologists interviewed described design strategies purposefully implemented for therapy sessions. Most design strategies consisted of controlling what people could or could not see. Psychologists spoke of positioning clocks and how it was important that clients could or could not see them. Psychologists managed to divvy up the counseling room into multiple visual fields by privileging themselves with views that only they could observe. For example, some therapists had images of personal significance mounted on the wall above their clients' heads. These images were intentionally mounted in such a manner so the client would not notice them. One psychologist intentionally located his offices on the second floor of a building because all the windows on that level were reflective. The tint and reflectivity of the windows prevented individuals on the street from seeing a therapy session in progress.





In this psychologist's office, clients can see out, but outsiders cannot see in due to the reflective windows. This helps protect clients' privacy.

Diffuse spot lighting was a common technique used to focus a session and encourage clients to disclose sensitive information. Floor lamps lit up corners and framed seating areas during later hours.

A clear need for all psychologists was that an office communicates the appropriate social scripts necessary for a successful therapeutic session. In this regard, the design of psychologists' offices varied according to the guiding philosophy and associated social role of each psychologist. Psychologists who were inclined to take a psychoanalytic and humanistic philosophy offered seating that was warm and comforting. In addition, psychologists made an effort to imply that the psychologist-client relationship was that of a team. The psychologist did not sit any higher than the client, and both often sat in similar seats with the psychologist's chair facing the client. Yet on occasion, stepping outside the designated social roles implied by the design of the therapeutic setting did have its consequences:

"A client picked the hard, straight-back chair. So I fell into the beanbag chair, and it really, really upset her." (Psychologist No. 5)



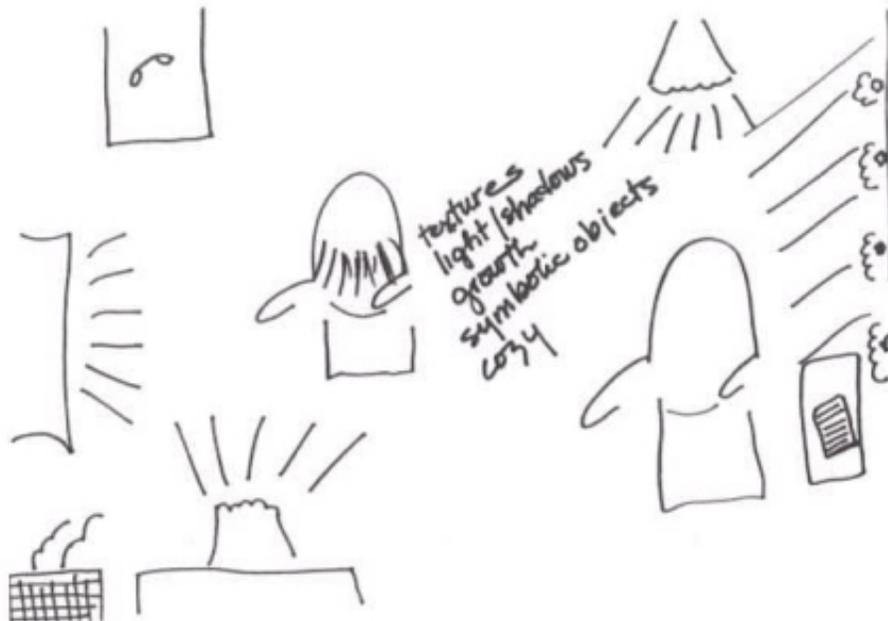
Client's view of the psychologist's office. Note the full-length view of a private garden, making this by far one of the most user-friendly office environments for

both therapist and clients

Psychologists had to rely on security methods when presented with a potentially harmful client. A common measure used to mitigate a confrontation between a psychologist and a client was to provide an easy means of egress for clients in case they became upset. Also, psychologists placed their chairs away from the path leading to the doorway, believing that anxious clients felt comforted by having a clearly defined exit.

Psychologists emphasized a desire to keep a client's attention on the session at hand. Windows were beneficial in anchoring a client to the therapeutic setting by offering natural views onto greenery. Even though psychologists favored having the natural light from a window looking onto a street or sidewalk, they listed drawbacks such as sporadic cars and passersby diverting a client's focus. In addition, windows looking out onto public areas threatened the privacy of clientele. As a result, many psychologists kept blinds drawn over their windows, causing offices to be dimly lit. One psychologist avoided such problems with the use of clerestory windows.

Plants and small items were also used to keep the client focused on the therapy session at hand. Two female psychologists catering to a female clientele displayed collections of figurines and stuffed animals. Male psychologists often presented gender-neutral objects and those reflecting sporting interests such as photographs of motorcycles and bicycles and prints of natural scenery. Many psychologists emphasized the need for an office with a warm, home-like appearance—comfortable chairs, framed pictures, wood shelving, plants, soft colors, and lamps.



A psychologist's visual image of her office. It featured the comfort associated with a homelike interior.

Thermal conditions of a therapeutic space were often troublesome. Many psychologists struggled with thermal control when neighboring businesses shared the same thermostat. Certain seasons and times of day when window exposures were hit hard by the sun caused overheating and discomfort. One psychologist used a space heater to compensate for the drafty winter air leaking through his windows.

Psychologists favored spaces with neutral colors, believing that these had a calming effect. Creams and whites were common. Carpets often were soft green or maroon. Shelves and furniture were often made of stained wood and upholstered with patterned fabrics.

One of the most critical needs for psychologists' offices was the ability to adapt to ongoing change. Whether moving into a new office or taking on additional clientele (in, say, shifting focus to family therapy), psychologists required spaces that would easily respond to their needs. In new offices, places to sit had to be negotiated to accommodate previously practiced social roles. If necessary, a few psychologists were even willing to rearrange furniture for specific clients. Flexible, sizable rooms were favored in this regard.

Privacy was another need that psychologists felt their office environments should reflect. Many offices had their own adjoining waiting rooms. Some psychologists staggered appointments with those of their colleagues so that clients would not run into each other. Psychologists who shared offices with other units in mental health centers or other businesses in an office building often could rely on anonymity to protect any given client's privacy:

"Having our own waiting room is certainly a privacy issue. But the location of the office is not as much of an issue [because] it's a building that has a variety of businesses in it. Anyone coming into the building isn't necessarily seeing a therapist." (Psychologist No. 2)



This busy intersection was adjacent to a mental health facility. Clients had to park on one side of the intersection and then wait to cross. Psychologists felt it overexposed clientele and threatened confidentiality.

Psychologists often cited noise as a threat to privacy. They complained of thin walls and hollow-core doors that bled conversations through to the adjoining waiting room. They used radios and indoor water features to provide white noise. Insulated interior walls and those constructed with concrete or brick were effective.

Psychologists believed that their clientele already dealt with too much chaos outside of the therapeutic setting. Accordingly, most believed it necessary to keep their offices in good order for therapy sessions. However, psychologists in both administrative and counseling positions who accumulated large volumes of paperwork often found it difficult to portray a sense of order. Some of their desks conveyed a sense of disorder and disarray.



In this office, the client's view consists of the psychologist's computer and a messy desk. This office also lacked windows.

Often, psychologists made their empathetic intentions clearer by displaying positive images on walls for a client's easy view, maintaining a comfortable proximity in relation to the client, maintaining healthy plants, and showcasing items such as signs with healing phrases and small angel statuettes. The cumulative effect of satisfying all the needs listed above was that of an empathetic and caring holding environment—one reflecting a psychologist's desire to foster positive therapeutic transactions with clientele.

Conclusion and discussion

This study explored psychologists as users of design with an environment-fit paradigm. Its goal was to identify ways in which psychologists use their offices to reinforce their competency and control over therapeutic transactions with clients. In-depth interviews

and content analyses revealed that physical features of psychologists' offices provide resources for what psychologists perceived were their own needs as well as those of their clients. Several environmental responses facilitated the meeting of needs and, in turn, a fit or congruency between an office and a psychologist.

Given the importance of physical features in the designs of psychologists' offices to meet therapeutic needs, designers and researchers should expand upon the repertoire of healthcare environments to include psychologists' offices. Such an enhanced definition would accommodate issues unique to psychologists' offices and allow comparisons between psychologists' offices and other therapeutic environments.

Psychologists whose offices did not meet their needs perceived these spaces as satisfactory for their clientele but not ideal. Most of the psychologists were housed in office space that they defined as less than ideal for therapeutic transactions. Consequently, relationships between therapeutic needs and environmental responses fluctuated. For example, some offices were too small and required rearrangement of furniture to suit the demands of an upcoming therapy session.

Psychologists considered certain design features prerequisites for a healthy, therapeutic environment and for positive outcomes among clients. The important physical features of psychologists' offices were analogous to those identified by Evans (2003) for most therapeutic settings and those suggested by Pressly and Heesacker (2001) and Goldstein (1998) specific to psychologists' offices. For example, psychologists believed that a quiet environment, control over the design of the office, views of nature including water and trees, indoor plants, and landscape paintings were restorative, reduced stress, and facilitated therapeutic transactions. Fluorescent lighting should be avoided as it leads to clients' discomfort and anxiety. Abstract works of art whose content is deliberately ambiguous and can be subject to potentially negative interpretations should not be displayed (Ulrich 1999). Comfortable seating arrangements must meet proxemic requirements but not be so comfortable as to induce sleepiness. Several psychologists preferred neutral colors so as not to provoke anxiety associated with vibrant colors such as red and orange.

In most cases, psychologists' offices engaged clients' sense of vision. Consequently, the designs of many offices were underused as tactile, auditory, and olfactory components within treatment and diagnosis. In contrast to Klein (1949), the physical design of psychologists' offices was also underused as an indicator of transferences. Consistent with prior literature, many psychologists would use the nonverbal behaviors of clients' seating habits as indicators of a therapeutic session's progress (Saari 2002; Satir 1964; Shefflen 1973). One cognitive-behavioral psychologist used a dinner table around which he and his clients sat to fill out tests and negotiate homework tasks. Another used clients' attachments to stuffed animals as indicators of unconscious, underlying feelings. However, treatment and diagnosis were usually relegated to talking and sitting, not playing or acting.

Psychologists must recognize the discrepancies between their own viewpoints of their offices and those of their clients. Their photographs and drawings revealed that they and their clients have dramatically different perspectives of the same office. Many psychologists had views of bookshelves and framed images, while clients faced a blinking computer screen and a desk cluttered with paper. Many of the psychologists were not aware of this discrepancy between viewpoints until they were asked to take the client's perspective.

The dynamics between therapeutic needs and environmental responses varied depending upon whether the psychologist was engaged in private practice or was a team member of a consortium or a mental health center (Luhrman 2000). For example, many large healthcare facilities frequently relocate their counseling departments to accommodate the changing needs of other departments. As a result, counseling offices are often housed in windowless basements and cramped quarters.



This plan for a hypothetical Psychological Services Center at a university shows clear separation between the research staff, support, and therapeutic areas. It allows clients to exit inconspicuously after therapy without parading through the waiting room and allows therapists and research staff to circulate without clients seeing them. Privacy concerns like these are paramount and must be integrated sensitively into the design of therapeutic environments.

Source: Cannon Design Healthcare Design Studio participants Coral Brandt, Jill Kirchherr, and Selwa Nadhimi

Psychologists' offices serve as workspaces laden with the territoriality and symbolism associated with other office environments (Joiner 1971; Sundstrom 1986). Ironically, some mental health facilities force psychologists to work in deplorable offices that inhibit personalization and territoriality. Several psychologists spoke of dissatisfying internships in inadequate offices. Many recalled windowless rooms with little privacy. One psychologist recalled an internship spent in a former gynecologist's office. The psychologist was forced to meet clientele with a decrepit gynecologist's chair positioned

in the center of the room. Whether they are clinicians at mental health centers, private clinicians, or interns, psychologists should receive some opportunity and adequate resources to select and design spaces for therapy.

Psychologists seem to take a trial-and-error approach when designing their offices. None of the psychologists interviewed had been taught how to design their offices. None used professional interior designers. Graduate schools of clinical and counseling psychology ought to train future clinicians on the importance of the office environment in the therapeutic process. Students could be informed about where to place lamps and clocks and how to personalize a space without intruding on a client's field of vision. Graduate training could address how and where to set up office environments with adequate views, lighting, and seating. Indeed, the discrepancies between clients' versus psychologists' viewpoints of psychologists' offices underscore that good design practices are not intuitive.

Conducting a qualitative study was advantageous given the exploratory nature of the research. Psychologists welcomed one-on-one interviews to discuss their offices, procedures that were compatible with those used daily when treating clients. In the future, the needs and responses revealed by the researchers in this study could be used in the development of a questionnaire.

Future research could isolate one specific need (e.g., privacy) or response and examine it in detail. Researchers could study the relationship between a specific therapeutic approach and the design of psychologists' offices. Further studies could focus specifically on either psychologists in private practice or those working for mental health centers. More important, future research can underscore that psychologists' offices are not only workspaces but also therapeutic environments affecting how well therapy might or might not be performed. In an era of competitive healthcare, clients who have a choice might gravitate to psychologists' offices that appear restorative and uplifting.

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