Activity Patterns and Life Changes in People With Depression

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The Activity Pattern Indicator (API) (Diller, Fordyce, Jacobs, & Brown, 1978) and the Schedule of Recent Experience (SRE) (Holmes, 1981) were used to determine activity patterns and life changes for 15 depressed patients admitted to an acute care mental health unit. Eight categories on the API were correlated with six categories on the SRE to determine the relationship between activity patterns 1 week and 1 month before hospitalization and life changes for the past year. Two correlations indicated that as the total number of life changes and home and family life changes increase, activity related to personal care decreases. Other correlations showed that as life changes related to health, work, and finance increase, such activities as passive recreation, homemaking, socializing, and personal care also increase. Because activity is the cornerstone of occupational therapy, occupational therapists, in treating patients with depression, might include facilitating close inspection of the patients' activity patterns in relation to the changes that have occurred in their lives.

Humans are actively involved with the environment, and it is the occupational therapist's belief that activities (i.e., occupational functions) can maintain and restore health (Reed & Sanderson, 1983). Occupational therapy has been defined as "management of the adaptive behavior required to perform these occupational functions" (Reed & Sanderson, 1983, p. 5). The concept of adaptive behavior is an important one because adaptation is the response to changes within one's life. The way in which a person adapts to these changes will influence his or her wellness. Activities that promote adaptive behavior will maintain health, whereas activities that promote maladaptive behavior will result in sickness. Occupational therapy aims to restore or maintain health through the use of activities that promote adaptive behavior.

Activities are important not only for the product but also for the process that takes place as the activity is carried out. This process is the act of doing, which Fidler and Fidler (1978) viewed as inherent to the adaptive behaviors used to effectively handle change. If doing is to be effective, the activity must be purposeful to the person performing it. The occupational therapist's job is (a) to determine with the patient those activities that are purposeful or that have been purposeful in the past or (b) to provide an opportunity to explore new activities (Reed & Sanderson, 1983). The examination of activity patterns and their relationship to change may be an effective method by which occupational therapists can better aid their patients in the selection of purposeful activity and thereby prevent maladaptive behavior.

This pilot study investigated the activity patterns that occurred in relation to life changes in patients with depression. It was assumed that the illness of depression was due to maladaptive behavior as a result of life changes.

Literature Review

The term depression is commonly used to describe emotional states ranging from normal to psychopathological. Because depression is considered a natural part of the emotional continuum, it is difficult to define both for clinical practice and for research use. At what point does depressive behavior change from normal to pathological? All persons react differently to life events. A life event warranting hospitalization for one person may be handled rather easily by another.

Researchers have attempted to determine those life events that seem prevalent among persons with depression. Costello (1982), replicating a study done in England, investigated 449 women from Alberta, Calgary, ranging from 18 to 65 years of age. He found...
only one of five factors—lack of intimacy with a spouse, cohabitant, or boyfriend—to be associated with depression. The four factors not associated with depression were (a) social class, (b) employment status, (c) number of children at home, and (d) loss of mother before the age of 11 years. Because Costello did not find all five factors to be associated with depression, he concluded that factors precipitating depression may be specific to the community in which one lives. Roy (1987) described the following five risk factors for depression: (a) a poor marriage, (b) having a primary relative who has been treated for depression, (c) separation from a parent before the age of 17 years, (d) having three children under 14 years of age at home, and (e) a lack of full-time or part-time employment. Lloyd (1980) reviewed the literature and found that a variety of factors precipitate depression. Despite the disagreement as to which events precede depression, the literature seems to support the notion that persons with depression have experienced more life changes than those without depression. Rahe (1979) found that researchers have not been able to agree upon which life events are "most representative and/or meaningful in a person's life" (p. 3), but believed that the evidence indicates that life changes are more likely to bring about symptoms of depression than are schizophrenia or physical illness.

As much as 80% of the illness that physicians see is thought to be due to psychosocial stress (Taylor, Ureda, & Denham, 1982). This stress seems to play an important role in determining the etiology and treatment of an illness. Positive and negative stressors have been identified. Like depression, the effect of stress varies depending on the person experiencing it (Rosch & Hendler, 1982).

Although depression has been widely investigated, relatively few studies have related it to activity level. Lewinsohn and Libet (1972) found that in depressed college students and depressed and nondepressed psychiatric patients, self-recorded mood levels and participation in pleasant activity were positively correlated. Lewinsohn and Graf (1973) found that nondepressed persons tend to participate in a wide variety of activities and to participate more often, whereas depressed persons participate less often and in fewer activities. Klyczek and Mann (1986) used a community mental health day treatment setting to compare the effects of verbal therapy with activity therapy. The subjects who received activity therapy experienced "a much greater reduction in symptomatology" (p. 610) than those who received verbal therapy. The length of community tenure (i.e., the period of time for which the patient was not an inpatient at a psychiatric hospital) was essentially the same for both groups. The activity therapy group experienced a significantly higher number of rehospitalizations, but for a shorter duration of time (Klyczek & Mann, 1986).

The purpose of the present study was to determine the relationship between activity patterns 1 week and 1 month before hospitalization and recent changes in life events for the preceding year in depressed patients admitted to an acute care mental health unit in Tacoma, Washington.

**Method**

**Subjects**

The subjects, patients on an acute care mental health unit who were over 18 years of age, were asked to participate in this study after a review of their charts indicated a diagnosis of depression without psychosis. Eight men and 7 women agreed to participate in the study. Of these 15 subjects, 12 were divorced, single, separated, or widowed, and 3 were married; 12 were unemployed or retired at the time of the study; and 13 were under the age of 40 years.

**Instrumentation**

Two questionnaires, the Activity Pattern Indicator (API) (Diller et al., 1978) and the Schedule of Recent Experience (SRE) (Holmes, 1981), were used. The API has 63 items divided into 11 categories and was developed to establish the activities in which people participate and the frequency of their participation (Diller et al., 1978). Scores reflect how time was spent during the past week and the past month. One determines an activity pattern frequency by adding all of the numbers that indicate how often a certain activity is performed. An activity pattern score for the week and for the month can be obtained for each of the 11 categories. Reliability of the API was established in a study of 52 married couples and in a study of 47 pain patients and their spouses. With the use of test-retest procedures, a significant correlation (p < .05) was found for 10 of the 11 categories (Diller et al., 1978; Fordyce, 1978). Face validity, concurrent validity, and criterion validity were also established for the API with the use of pain patients and activity diaries (Wenck, 1981).

The SRE correlates life changes with the probability of becoming ill (Taylor et al., 1982). It contains 42 items divided into five categories: (a) health, (b) work, (c) finance, (d) home and family, and (e) personal and social (Holmes, 1979). Each item is a specific event, pleasant or unpleasant, which requires some degree of adjustment by the person to whom it occurred. Each item has been assigned a life change unit (LCU) score, which is indicative of the magnitude of change required to adjust to that event.
An item is checked if it has happened to the person in the past year, and if it has happened more than once, the number of times it has occurred is recorded. One can then determine the total LCU by adding the individual LCUs. Persons who score over 300 LCUs in the past year have an 80% chance of becoming sick; a score of 150 to 299 LCUs, a 50% chance of becoming sick; and a score of less than 150 LCUs, a 30% chance of becoming sick (Holmes, 1979). The totals for each category on the SRE can also be determined.

Concurrent validity on the SRE was established through the correlation of the magnitude of change assigned to the events between different subgroups of the larger sample population (Holmes, 1979). For example, a correlation of more than .90 was found when comparing men to women, single persons to married persons, and age groups. The SRE was also correlated cross-culturally between a Seattle group and a Japanese, a French-speaking, a Spanish-speaking, and a Scandinavian group. The correlation coefficients ranged from .65 to .98 (Holmes, 1979).

**Procedure and Data Analysis**

The subjects were asked to complete both the API and the SRE. I was available to answer questions. Scores on the API and SRE were correlated with the Pearson product-moment correlation to determine if a relationship existed between activity patterns and life changes. The five categories and the total score of the SRE were correlated with eight categories of the API, including the week score and the month score for each category. The employment category of the API was discarded due to the unemployed status of 75% of the subjects. Additionally, the homemaking (female), homemaking (male), and homemaking (general) categories were combined into one homemaking category.

**Table 1**

<table>
<thead>
<tr>
<th>API Category</th>
<th>Total</th>
<th>Health</th>
<th>Work</th>
<th>Finance</th>
<th>Home &amp; Family</th>
<th>Personal &amp; Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal care</td>
<td>-.56</td>
<td>.015</td>
<td>-.14</td>
<td>.305</td>
<td>-.06</td>
<td>.412</td>
</tr>
<tr>
<td>(week)</td>
<td></td>
<td></td>
<td></td>
<td>.11</td>
<td>.346</td>
<td>-.52</td>
</tr>
<tr>
<td>Personal care</td>
<td>.27</td>
<td>.170</td>
<td>.04</td>
<td>.437</td>
<td>.26</td>
<td>.171</td>
</tr>
<tr>
<td>(month)</td>
<td></td>
<td></td>
<td></td>
<td>.57</td>
<td>.013</td>
<td>.15</td>
</tr>
<tr>
<td>Homemaking</td>
<td>.17</td>
<td>.277</td>
<td>.02</td>
<td>.478</td>
<td>.44</td>
<td>.049</td>
</tr>
<tr>
<td>(month)</td>
<td></td>
<td></td>
<td></td>
<td>.18</td>
<td>.261</td>
<td>-.05</td>
</tr>
<tr>
<td>Passive recreation</td>
<td>.63</td>
<td>.005</td>
<td>.62</td>
<td>.007</td>
<td>.33</td>
<td>.118</td>
</tr>
<tr>
<td>(month)</td>
<td></td>
<td></td>
<td></td>
<td>.23</td>
<td>.204</td>
<td>.40</td>
</tr>
<tr>
<td>Socializing</td>
<td>-.02</td>
<td>.468</td>
<td>-.19</td>
<td>.244</td>
<td>.46</td>
<td>.043</td>
</tr>
<tr>
<td>(month)</td>
<td></td>
<td></td>
<td></td>
<td>.30</td>
<td>.137</td>
<td>-.19</td>
</tr>
</tbody>
</table>

**Note.** API = Activity Pattern Indicator (Diller, Fordyce, Jacobs, & Brown, 1978); SRE = Schedule of Recent Experience (Holmes, 1981). The values are based on the raw scores of the API and the life change units of the SRE.

**Results**

The scores on the SRE ranged from 442 LCUs to 1,558 LCUs, with a mean score of 836 LCUs. Three subjects scored 400 to 599 LCUs; 6 subjects, 600 to 799 LCUs; 2 subjects, 800 to 999 LCUs; and 4 subjects, over 1,000 LCUs. These results are notable because all subjects scored well above the 300 LCU level, thus indicating an 80% chance of becoming ill (Holmes, 1979). (See Table 1 for the correlation values between the API and SRE categories.)

**Discussion**

One limitation that seems unavoidable when studying persons with depression is these subjects' questionable reliability in accurately relating the occurrence of events and the degree of severity of those events (Lloyd, 1980). A contributing factor to this diminished reliability may be adverse reactions to medications. Other limitations of the present study were the small, focused sample size, which limited the number of significant correlations, and the self-report nature of the instruments, which introduces the potential for error. Additionally, the demographics of the population studied are not considered typical of the population of persons with depression. For example, only 2 of the 15 subjects were over the age of 40 years. Because of these limitations, the descriptive results of this study cannot be generalized. Despite lack of generalizability, however, the results lend themselves to some interesting discussion and interpretation.

The personal care category on the API had significant correlations with the total SRE score and with the finance score and home and family score on the SRE. It appears that when stress increases, personal care is the area in which maladaptive behaviors first appeared for these subjects. Initially, one would think that an increase in personal care is beneficial, but
several of these personal care items are often indicators of a depressed mood. A change in personal care may be the maladaptive behavior used to cope with total life changes, changes in financial status, and changes in the home and family, so an increase or decrease in personal care is not as beneficial as it first appears. Due to their disparate nature, analysis of the personal care items is needed to further clarify the meaning of these correlations involving personal care.

The strong correlation between total SRE and passive recreation (month) on the API is particularly important to the occupational therapist. The passive recreation category includes such solitary activities as (a) stopping to listen to a radio; (b) reading a book; (c) working on a hobby or craft; and (d) stopping to watch television. Health on the SRE was also highly correlated with passive recreation (month). The health category includes (a) a major change in sleeping habits; (b) a major change in eating habits; (c) a major change in type and/or amount of recreation; and (d) major personal illness or injury. The relationship between passive recreation and stress deserves further investigation by occupational therapists. Passive activities may be adaptive behaviors that are used to deal with change (stress). If an adaptive behavior such as passive recreation is exercised to an extreme, however, it has the potential to become maladaptive, thus interfering with established routines and roles. The occupational therapist can be instrumental in helping persons define their maladaptive behaviors and reestablish adaptive behaviors.

The association between work on the SRE and homemaking (month) and socializing (month) on the API is difficult to evaluate. The correlations seem to reflect that the subjects were permitted more time to engage in homemaking activities and socializing (i.e., as a result of retiring or being fired). Further research with a larger population and item analysis of the API is warranted.

In administering the API, I found that it generated some interesting discussions with the subjects. Evaluation of the API as an assessment and treatment tool would be beneficial. Educating patients about their activity patterns could be an effective method of prevention against future hospitalizations. An item analysis of the API is warranted due to the dissimilarities of items within the different categories. A replication of the present study with a larger sample of subjects with depression or with a population with a different condition would be beneficial. Additionally, a replication of this study with the use of matched samples of depressed and nondepressed persons might help to clarify the relationship between stress and activity patterns. Because activity is integral to the profession of occupational therapy, further investigation of the activity patterns of persons with a variety of conditions and disabilities seems to be a logical area for research and discussion.

Conclusion

This descriptive pilot study correlated life changes with the activity level of depressed patients in an acute care mental health unit. Life changes as measured by the SRE were highly correlated with depression. The study results showed that for patients with depression, (a) as life changes increase, personal care decreases and passive recreation increases; (b) as health-related stress increases, passive recreation increases; (c) as work-related stress increases, homemaking and socializing increase; (d) as financial stress increases, personal care increases; and (e) as home and family stress increases, personal care decreases. These findings suggest the importance of the occupational therapist’s examining the activity level of patients not only while in the hospital but also before hospitalization. Because occupational therapy’s focus is on activity, it is within our realm to educate patients to be aware of their activity levels and the implications of changes in levels, thereby diminishing the number of maladaptive behaviors and possibly preventing rehospitalization.

Acknowledgments

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A copy of the Activity Pattern Indicator can be obtained from Wilbert E. Fordyce, PhD, Department of Rehabilitation Medicine, R1-30, University of Washington School of Medicine, Seattle, Washington 98195. A copy of the Schedule of Recent Experience can be obtained from the Department of Psychiatry and Behavioral Science, University of Washington School of Medicine, Seattle, Washington 98195.

References


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