The purpose of this study was to document variation in affective responses to different types of traditional occupational therapy activities. Each of 45 subjects (24 psychiatric inpatients and 21 matched control subjects) participated in a series of four activities: leather lacing, working with clay, filing, and exercising. Immediately following each activity, each subject completed the Affective Self-Report Checklist designed to elicit affective responses. In addition, each of the activity sessions was professionally videotaped and later rated for affective responses by trained observers. The data analysis revealed no significant differences in affective responses to activities between groups. However, with the groups combined, significant differences were found in affective responses on 6 of the 15 scales of the checklist, with clay and filing the pair of activities that differed most. These findings are a necessary first step in the collection of baseline data regarding responses to activities.

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Brena Manoly, PhD, OTR, at the time of this study, was a consultant to the Department of Occupational Therapy, Temple University, Philadelphia.

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body of knowledge in occupational therapy. Gathering baseline data on the affective responses to activities is a necessary precursor to exploring the efficacy of the therapeutic use of activities (Ostrow & Kaplan, 1987). For this study, the affective component was isolated from the more general theory cited previously regarding the inherent quality of an activity to elicit affective, cognitive, and sensorimotor responses (Llorens, 1981, 1984a). The hypothesis tested stated that activities have inherent characteristics that can elicit similar affective responses.

**Literature Review**

Occupational therapists have long claimed that activities have inherent characteristics that can elicit similar affective responses. This premise was implicit in much of the thinking about activities expressed by the field’s founders (Dunton, 1928, 1937) and received theoretical support from some early psychiatrists (Menninger, 1936). Fidler (1948), Fidler and Fidler (1963), and Weston (1960) emphasized and elaborated these ideas during the psychoanalytic era of practice in psychiatric occupational therapy. Although generating limited empirical data, Fidler (1982) stated that experience provided convincing evidence that different activities elicit similar affective responses.

Empirical support for the theory of affective responses to inherent characteristics is limited. Nelson and his colleagues (Adelstein & Nelson, 1985; Carter, Nelson, & Duncombe, 1983; Henry, Nelson, & Duncombe, 1984; Kremer, Nelson, & Duncombe, 1984; Nelson, Peterson, Smith, Boughton, & Whalen, in press; Nelson, Thompson, & Moore, 1982) have used the Osgood Semantic Differential extensively to discern affective responses to activities such as collage and origami in groups of both psychiatric patients and occupational therapy students. Their research has provided data that lend support to the premises that individuals differ in their affective responses to different activities and that because of inherent characteristics of activities, different activities elicit different affective responses from individuals. These findings bear resemblance to survey data reported earlier by Fox and Jirgal (1967), Smith, Barrows, and Whitney (1958), Tickle and Yerxa (1981), and Trujillo (1980). (These authors’ data, however, were obtained from surveys rather than through actual participation in an activity.) In contrast, in a study designed specifically to generate data about inherent affective, cognitive, and sensorimotor factors of activities, Llorens (1986) found only inconsistent agreement in participants’ affective responses.

Of particular relevance to the current research is the study of Kremer et al. (1984), who found that groups of psychiatric patients with chronic conditions responded differently to activities commonly used in occupational therapy. However, the between-groups differences in affective responses on the Osgood Semantic Differential were significant only for the evaluation factor (positive or negative feelings about the activity). Differences for the other two factors on Osgood’s scale, power (the forcefulness of the experience) and action (the pace of the experience), did not reach significance. Nonetheless, some differences in affective responses could be discerned, and chronic psychiatric patients rated a cooking activity as more positive affectively than collage or exercise-parachute activities.

Another body of research supports the theory that activities do not elicit specific affective responses outside the properties imbued in them by interaction with the performer (Allen, in press; Lyons, 1983; Trujillo, 1980; Yerxa, 1979). According to this theory, affective responses to activities are created by the individual from an array of alternatives. This theory is grounded in Soviet psychology (Kozulin, 1986) and in Kelly’s (1955) psychology of personal constructs. Empirical support also appears in the leisure studies literature (Havighurst, 1961; London, Crandall, & Fitzgibbons, 1977; Tinsley & Kass, 1979; Williams, 1977). Nyström (1974) reported findings in the occupational therapy literature that support this theory.

Despite varying viewpoints regarding affective responses to inherent characteristics, such responses to activities remain a primary concern within the profession. Occupational therapists agree that successful outcomes of treatment are determined in part by the patient’s affective responses to activities, including feelings of competence, control, success, and self-worth (Allen, 1985; Barris, Kielhofner, & Watts, 1983; Fidler & Fidler, 1978; Fine, 1983; Mosey, 1981).

**Methodology**

**Instruments.** Two instruments were developed for this study, the Affective Self-Report Checklist and the Observer Rating Form, as no suitable standardized instruments were available. The Osgood Semantic Differential was not used because an instrument more directly related to affective responses to activities was desired.

The Affective Self-Report Checklist has 15 bipolar adjectives, each rated on a 5-point scale, which were selected by the researchers as most commonly associated with activities used in occupational therapy (e.g., nervous/relaxed, sad/happy, insecure/confident).

The Observer Rating Form provided a semistructured format for recording observable behaviors related to affect. The number of verbalizations was re-
**Table 1**

Characteristics of the Sample

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Patient (n = 24)</th>
<th>Control (n = 21)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>11 (46%)</td>
<td>8 (38%)</td>
</tr>
<tr>
<td>Female</td>
<td>13 (54%)</td>
<td>13 (62%)</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1 (4%)</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>20-29</td>
<td>7 (29%)</td>
<td>8 (38%)</td>
</tr>
<tr>
<td>30-39</td>
<td>8 (33%)</td>
<td>6 (29%)</td>
</tr>
<tr>
<td>40-49</td>
<td>5 (21%)</td>
<td>3 (14%)</td>
</tr>
<tr>
<td>50-59</td>
<td>1 (4%)</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>60+</td>
<td>2 (8%)</td>
<td>2 (10%)</td>
</tr>
<tr>
<td><strong>Highest educational level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>9 (38%)</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>High school</td>
<td>13 (54%)</td>
<td>15 (71%)</td>
</tr>
<tr>
<td>College</td>
<td>1 (4%)</td>
<td>4 (19%)</td>
</tr>
<tr>
<td>Graduate school</td>
<td>1 (4%)</td>
<td>1 (5%)</td>
</tr>
</tbody>
</table>

The researchers were thus able to match the patient and control groups by sex, age, and educational level (see Table 1).

**Activities.** Each subject participated in a series of four typical occupational therapy activities: lacing (whip stitch) a leather comb case; working with terra cotta self-hardening clay without direction; filing alphabetized folders (consisting of craft instructions, patterns, catalogues, etc.) into a desktop locking file; and riding a stationary bicycle. Selection of activities was based on a synthesis of the literature on activity analysis (e.g., Cynkin, 1979; Fidler, 1982; Fidler & Fidler, 1963; Mosey, 1981) and on the researchers’ collective clinical experience. The intent was to provide variation across several dimensions of activity analysis (see Table 2).

**Testing procedure.** To determine eligibility for participation in the study, patients were interviewed on their units by both the test administrator and a member of the research team. If the patient met all the criteria, he or she was accompanied by the test administrator to a small, comfortably furnished room that ensured privacy from the rest of the hospital activities. The tester and subject were seated on adjacent sides of one table, facing a camera. To simulate the usual occupational therapy evaluation process, the tester gave assistance if requested, maintained normal conversation if initiated by the subject, and interrupted the activity for reasons of safety, if necessary. All sessions were professionally videotaped.

The order of activities was randomized. The control subjects participated in activities in the same order as the patients with whom they were matched. The test administrator for all subjects was an occupational therapist who did not know the purpose of the study. For each subject, all activities were completed in one session, lasting 45 to 60 minutes.

**Rating.** Prior to each activity, the subject was asked if he or she had any previous experience with the activity and how he or she felt about it. The activity was then presented with both verbal and visual instruction. For the activities that produced end products (working with clay and leather lacing), all subjects were told they could keep the project. After a subject either completed an activity or chose to stop working on it, he or she completed the Affective Self-Report Checklist.

Using the videotapes of the activity sessions, two of the researchers, who knew none of the subjects, independently completed Observer Rating Forms. Each rater was responsible for half the activity sessions (selected randomly). Additionally, a random sample of 25% of the sessions was reviewed by both raters to ensure interrater reliability.

**Pilot study.** A pilot study was conducted with 10 subjects to assess the reliability and validity of the instruments, to refine methodological procedures, and to train the tester. As a result, the Observer Rating Form was revised to reflect the researchers’ observa-

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**Table 2**

Dimensions of the Selected Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Leather Lacing</th>
<th>Working With Clay</th>
<th>Exercycling</th>
<th>Filing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine motor</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Gross motor</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Work related</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Leisure related</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Structured</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Unstructured</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Messy</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Clean</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Measurable goal</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Ambiguous goal</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End product</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>No end product</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Creative</td>
<td></td>
<td></td>
<td></td>
<td>NA</td>
</tr>
</tbody>
</table>

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*The American Journal of Occupational Therapy*
tions more accurately and to improve interrater reliability. Because the pilot study had three raters and the final study had only two, interrater reliability was recalculated for the final study.

Data analysis. The data from the Affective Self-Report Checklist were analyzed by a repeated measures analysis of variance (group by activity, with activity being a within-subjects repeated measure) to determine if there were any differences between the way the two groups (patient and control) responded on each dimension on the checklist. In addition, the data were analyzed to determine if there were differences between responses to different activities. There were no differences between groups for any of the dimensions, but for both groups, responses to the four activities differed significantly on 7 of the 15 scales. In these instances, the groups were collapsed into one, and paired t-tests between all possible pairs of activities were performed to determine which activities differed significantly in terms of response. Two cases with missing data (instances in which patients did not complete the form) were dropped in a pairwise fashion. Because there were 7 pairs of t-tests, the alpha level was adjusted from .05 to .01. Paired t-tests are an acceptable post hoc measure when repeated measures are involved. Unlike most post hoc measures, this method does not hold an assumption of independence across groups (Tabachnick & Fidell, 1983).

The same sequence of tests was applied to the data from the Observer Rating Form. On one scale (facial expression) the patient and control groups were perceived to have behaved differently. For scales without between-group differences or interaction effects, the two groups were collapsed and paired t-tests were performed.

Results

Validity and Reliability of the Instruments

Affective Self-Report Checklist. Content validity of the Affective Self-Report Checklist was ensured by having the instrument reviewed by several experienced occupational therapy clinicians and by revising the instrument according to their suggestions. Construct validity was demonstrated by the interitem correlations of the self-report scales. Although some of the scales showed strong correlations with each other, these correlations did not hold across activities. Additionally, the results of the analysis of variance indicated that scales which correlated highly did not all behave in the same manner. For example, although worthwhile/worthless correlated significantly with capable/not capable, four pairs of activities differed significantly on the latter scale but none differed significantly on the former.

Observer Rating Form. Interrater reliability was calculated for each assigned activity. Four of the scales (depression, anger, lability, and tempo) showed no variability, and thus the computation of reliability was not possible. Of the remaining scales, 11 had reliability correlation coefficients greater than .70 (p < .001) (see Table 3). The remaining items also had correlations statistically significant at the .001 level. For future use, raters should be trained to a proficiency criterion of .70 or above.

Subjects’ Responses

Because of the nature of the data, statistical analyses were not performed on the information regarding each subject’s previous experience with each activity and attitude toward the activity prior to the test. Examination of this information revealed that the patients and control subjects had similar degrees of experience with all the test activities except leather lacing (the patient group had greater experience with this activity than the control group) (see Table 4). The groups differed, however, in their attitudes toward the activities. Both groups were equally positive only in their attitude toward the exercycle. The patient group was less positive than the control group toward

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Interrater Reliability of the Observer Rating Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>During presentation of activity</td>
<td></td>
</tr>
<tr>
<td>Verbal response</td>
<td>.895</td>
</tr>
<tr>
<td>Facial expression</td>
<td>.700</td>
</tr>
<tr>
<td>During activity</td>
<td></td>
</tr>
<tr>
<td>Facial expression</td>
<td>.549</td>
</tr>
<tr>
<td>Mood</td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td>No variability</td>
</tr>
<tr>
<td>Elated</td>
<td>.580</td>
</tr>
<tr>
<td>Anxious</td>
<td>.780</td>
</tr>
<tr>
<td>Angry</td>
<td>No variability</td>
</tr>
<tr>
<td>Flat</td>
<td>.183</td>
</tr>
<tr>
<td>Labile</td>
<td>No variability</td>
</tr>
<tr>
<td>Verbalizations</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>.577</td>
</tr>
<tr>
<td>Task related</td>
<td>.438</td>
</tr>
<tr>
<td>Content</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>.975</td>
</tr>
<tr>
<td>Task related</td>
<td>.880</td>
</tr>
<tr>
<td>Tempo</td>
<td>No variability</td>
</tr>
<tr>
<td>Volume</td>
<td>.476</td>
</tr>
<tr>
<td>Motor activity</td>
<td>.740</td>
</tr>
<tr>
<td>Posturing</td>
<td>.497</td>
</tr>
<tr>
<td>Task behavior</td>
<td></td>
</tr>
<tr>
<td>Initiation</td>
<td>.690</td>
</tr>
<tr>
<td>Performance</td>
<td>.317</td>
</tr>
<tr>
<td>Investment</td>
<td>.832</td>
</tr>
<tr>
<td>Attention</td>
<td>.529</td>
</tr>
<tr>
<td>Frustration tolerance</td>
<td>.712</td>
</tr>
<tr>
<td>Time spent on activity</td>
<td>.985</td>
</tr>
<tr>
<td>Activity completed</td>
<td>.808</td>
</tr>
<tr>
<td>Keeping activity</td>
<td>.881</td>
</tr>
</tbody>
</table>
Table 4
Subjects' Experience With and Attitudes Toward the Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Previous Experience</th>
<th>Attitude Before Task</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Positive</td>
</tr>
<tr>
<td>Leather lacing</td>
<td>Patient group</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Control group</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Working with clay</td>
<td>Patient group</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Control group</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Filing</td>
<td>Patient group</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Control group</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Exercycling</td>
<td>Patient group</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Control group</td>
<td>16</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. Table shows the number of subjects giving each response. Questions were asked prior to participation in the activities.

leather lacing and working with clay, whereas the control group was less positive than the patient group toward filing. Despite these differences, the groups did not differ significantly in their responses on the Affective Self-Report Checklist.

Affective Self-Report Checklist. Significant differences in responses to activities were found on 7 of the 15 self-report scales. Table 5 shows the means and standard deviations for each of these 6 scales for pairs of activities with significantly different responses. Note that for some of the scales, the higher mean indicates the more negative response, whereas for other scales the higher mean indicates the more positive response. The scales for which no responses were significantly different were sad/happy, embarrassed/proud, energetic/tired, angry/calm, giving up/finishing, afraid/safe, worthwhile/worthless, and comfortable/uncomfortable.

Filing and working with clay each differed significantly from the other activities a total of 10 times. In 8 of the 10 instances in which clay differed from another activity, subjects responded more negatively to clay. They reported feeling less capable, more disappointed with their work, and less smart while working with clay than while filing or using the exercycle. They also reported feeling less confident and less productive while working with clay than while filing. However, subjects acknowledged feeling more playful during the clay activity than during filing or lacing.

The scale that provided the greatest degree of discrimination among activities was capable/helpless, on which four pairs of activities differed significantly. Subjects reported feeling more capable while filing than when exercising, leather lacing, or working with clay and more capable when exercising than when working with clay. Three pairs of activities differed on the satisfied/disappointed scale, with subjects again reporting feeling more satisfied with filing than with working with clay or lacing and more satisfied with exercising than with working with clay. Two pairs of activities were significantly different on the insecure/confident scale, with subjects feeling more confident filing than working with clay or lacing. Also, two pairs of activities differed on the dumb/smart scale; subjects reported feeling less smart while working with clay than while using the exercycle or while filing. Leather lacing and exercising differed on the nervous/relaxed scale, with subjects feeling more relaxed on the exercycle.

Table 5
Means and Standard Deviations for t Tests Showing Differences on the Affective Self-Report Checklist

<table>
<thead>
<tr>
<th>Pair of Activities</th>
<th>Nervous/Relaxed</th>
<th>Capable/Helpless</th>
<th>Disappointed/Satisfied</th>
<th>Productive/Unproductive</th>
<th>Serious/Playful</th>
<th>Insecure/Confident</th>
<th>Dumb/Smart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working with clay</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lacing*</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3.178</td>
<td>1.403</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Exercycling</td>
<td></td>
<td>—</td>
<td>—</td>
<td>2.533</td>
<td>1.254</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Working with clay</td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Exercycling</td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Working with clay</td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3.605</td>
<td>0.929</td>
</tr>
<tr>
<td>Filing</td>
<td></td>
<td>—</td>
<td>—</td>
<td>4.222</td>
<td>1.126</td>
<td>3.689</td>
<td>0.949</td>
</tr>
<tr>
<td>Exercycling</td>
<td>—</td>
<td>1.744</td>
<td>1.093</td>
<td>4.070</td>
<td>0.936</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Lacing</td>
<td></td>
<td>2.326</td>
<td>1.229</td>
<td>3.349</td>
<td>1.173</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Filing</td>
<td>—</td>
<td>1.200</td>
<td>0.405</td>
<td>4.356</td>
<td>0.933</td>
<td>3.178</td>
<td>1.403</td>
</tr>
<tr>
<td>Exercycling</td>
<td></td>
<td>—</td>
<td>—</td>
<td>2.467</td>
<td>1.160</td>
<td>3.444</td>
<td>1.198</td>
</tr>
<tr>
<td>Lacing</td>
<td>3.744</td>
<td>1.026</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Filing</td>
<td>—</td>
<td>3.233</td>
<td>1.722</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Exercycling</td>
<td>—</td>
<td>1.200</td>
<td>0.405</td>
<td>4.356</td>
<td>0.933</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Lacing</td>
<td>—</td>
<td>2.000</td>
<td>1.261</td>
<td>3.644</td>
<td>1.090</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Filing</td>
<td>—</td>
<td>1.209</td>
<td>0.412</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Exercycling</td>
<td>—</td>
<td>1.744</td>
<td>1.093</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note. On the rating scale, the first adjective in each pair of activities was assigned a 1, the second, a 5. Unless otherwise noted, p < .01.
* p < .017.
Observer Rating Form. As noted above, the Observer Rating Form results showed significant differences between the patient and control groups on only one scale, facial expressions. The observers noted that the control subjects smiled more during both the activity presentation and the activity process than did the patients. However, with the patient and control groups collapsed into one, there were five dimensions on which pairs of activities differed significantly (see Table 6).

The observation factor that discriminated most between the activities was number of task-related verbalizations, on which four of the six pairs of activities differed. Subjects talked significantly more while working with clay and leather lacing than while filing and excercycling. Subjects also smiled more during the clay and excercycling activities than during filing. They demonstrated more signs of anxiety when working with clay than when excercycling and also seemed more anxious when leather lacing than while filing. The elation and motor activity scales discriminated between one pair of activities each. Subjects seemed more elated during the clay activity than while filing and more energetic while excercycling than while leather lacing.

Other results. The only gender difference on the Affective Self-Report Checklist was that men reported being more satisfied with their performance than women. On the Observer Rating Form, the raters reported that women smiled more and gave more positive initial responses to the presentation of activities than did men. In addition, the men seemed more involved in the activities.

Discussion
The Observer Rating Form indicated some differences both between groups and across activities; however, the variability was limited, with significant differences occurring in only 10 out of a possible 150 cells (six pairs of activities by 25 observer rating items). It is possible that participants did not respond differently to the four activities. However, the observers may have been unable to differentiate responses because of a number of other factors. One possibility is that subtle mood changes may not be apparent behaviorally. Another possibility is related to the videotaping process. In a number of cases, the facial features of the subjects were difficult to distinguish because of poor lighting. In addition, the photographer maintained a fairly constant image of the total person on film. It might have been more useful to have used two cameras and produced a split screen image of both the total person and a facial close-up simultaneously.

The Affective Self-Report Checklist indicated more variation in responses. Although there were no statistically significant differences between the responses of the patient and control groups, there were statistically significant differences across activities for the groups combined. Out of 90 cells (six pairs of activities by 15 self-report items), there were 15 significant results. The pair of activities that differed most was working with clay and filing. These activities differed on six scales: capable/helpless, satisfied/disappointed, productive/unproductive, serious/playful, insecure/confident, and dumb/smart.

One possible interpretation of the data is that the scales clustered into two groups: those that related specifically to the task performance and those that did not. The scales reaching significance were those related to task performance. Filing elicited stronger feelings of capability, satisfaction, confidence, and intelligence than did working with clay. In addition,
the subjects judged filing as a more serious task than working with clay.

The lack of significant differences in affective responses on scales such as happy/sad, angry/calm, afraid/safe, and worthwhile/worthless may indicate that these responses are not elicited in a short time period or that the four activities chosen by the researchers did not have the potential to elicit these responses. Another possible interpretation centers around the terminology used in the Affective Self-Report Checklist. Some of the terms used to describe affect possibly were value laden and therefore may have tended not to elicit honest responses. For example, subjects may have been reluctant to admit to feeling "embarrassed" or "dumb" and might therefore have rated their responses close to neutral, thus reducing the variability of the results.

Finally, the finding that affective responses to an activity differed prior to and after engagement in the activity is noteworthy. It calls into question the reliability of much of the literature both supporting and refuting the theory of affective responses to inherent characteristics of activities. This body of literature is based on survey research methods rather than actual participation in activities (Fox & Jirgal, 1967; Havig-hurst, 1961; London et al., 1977; Nystrom, 1974; Smith et al., 1958; Tickle & Yerxa, 1981; Tinsley & Kass, 1979; Trujillo, 1980; Williams, 1977).

Conclusion

This study represents a first step in documenting affective responses to inherent characteristics of activities. The study examined responses to each activity as a whole. Although activities with varied dimensions were selected, the study did not test specific, a priori hypotheses regarding which components of the activities would contribute to affective responses.

Perhaps the inherent characteristics that elicit affective responses are the characteristics that relate directly to the sensorimotor, perceptual, and cognitive components and the subsequent affective response is therefore dependent on the match between the abilities of the individual and the demands of the activity. This view is supported by the observation that the few affective responses that differed significantly between activities were those in which cognitive response would be especially difficult to isolate from affective response (e.g., capable/helpless, dumb/smart). In addition, the activity that differed most frequently from all other activities was working with clay, a creative activity that requires more complex cognitive operations than do leather lacing, exercycling, or filing, which are more imitative.

This study has statistically verified some of the "common sense" clinically derived theories on which occupational therapists have based their practice. It documents differences in affective responses to a highly structured, repetitive activity (i.e., filing) and an unstructured, nondirected activity (i.e., working with clay). Further research is needed to refine occupational therapists' understanding of the specific elements of activities that most influence an individual's affective response.

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References


