Flow and the Occupational Therapy Practitioner

Karen Jacobs

Key Words: job satisfaction (attitude)

Objective. This study examined optimal flow experience, a form of job satisfaction in occupational therapy practitioners employed at physical rehabilitation facilities in New England.

Method. Factors associated with flow were measured over a 5-day work week with the Experience Sampling Method. Ninety-seven percent of the 90 subjects' responses were analyzed and 43% of the subjects participated in the debriefing interview.

Results. Subjects experienced flow a relatively small amount of the time—an average of 5.24 times in a 5-day work week, with a range of 1 to 12 experiences. Flow was experienced most often (23.6%) when subjects were working with a client in some type of intervention. Perceived autonomy and self-esteem were high during a flow experience. Subjects described their flow experiences as including such moods and attitudes as “alert,” “happy,” “involved,” “creative,” “excited,” “productive,” “accomplished,” “proud,” “good,” “confident,” “positive,” and “challenged.” Conversely, subjects in flow also tended to describe their mood as “tense.”

Conclusion. Retaining occupational therapy practitioners is critical to meeting and increasing the unprecedented demand for health care services. Understanding what causes occupational therapy practitioners to experience flow and how to transform an activity into a flow experience may ultimately improve job satisfaction, productivity, and the retention of practitioners.

Job satisfaction in America has been described as declining despite improved workplace conditions, technological advances, and the legislative mandates of the last half century (Fraser, 1989; Quinn & Staines, 1979). The decline is thought to be related to the quality of the work experience, which is too stressful and high pressured; to limited recognition and advancement; and to the lack of variety and challenge in the work itself. Declining job satisfaction in occupational therapy is evidenced by an increased attrition rate (Bailey, 1990a, 1990b). Retaining occupational therapy practitioners is critical to meeting and increasing the unprecedented demand for health care services. Understanding what makes occupational therapy practitioners satisfied on the job or causes them to experience flow may ultimately improve their productivity and quality of intervention (Davis & Bordieri, 1988). Flow is described as a positive feeling that occurs when there is a balance between perceived challenges and one’s skills, and may include enjoyment, intense or total involvement, deep concentration; or the loss of one’s sense of time (Csikszentmihalyi & Csikszentmihalyi, 1988).

Literature Review

Job satisfaction has been studied since 1919, especially in the last decade (Lyons, 1993). Attempts to understand job satisfaction and thus increase it are associated with a desire to increase worker productivity and, ultimately, profitability. Job satisfaction is associated with either extrinsic or intrinsic factors. Extrinsic factors include the job’s physical design, social relationships, payment, and supervisory systems. Self-esteem and perceived autonomy are intrinsic forms of job satisfaction. Optimal flow experience, knowledge of which has expanded over the last decade, is another intrinsic factor.

Flow can be described as the relationship between one’s perceptions of the challenges of one’s immediate situation and the skills one uses to manage the situation. It is a balanced ratio of perceived challenges to skills. When the optimal flow experience occurs, one experiences joy, feels intensely involved, can concentrate deeply, enjoys a clarity of goals and feedback, loses a sense of time, and lacks self-consciousness. Persons in flow have reported feeling “strong,” “active,” “creative,” “concentrated,” and “motivated” (Csikszentmihalyi, 1990, pp. 64, 158). M. Csikszentmihalyi (Csikszentmihalyi & Csikszentmihalyi, 1988) commented that “to remain in flow, an individual must increase the complexity of the activity by developing new skills and taking on new challenges. Flow forces people to stretch themselves, to always take on another challenge, to improve their abilities… [it is a process of continually] discovering something new” (p. 30). For example, a worker in flow should be able to function at his or her best and be at the peak of productivity when work is satisfying or enjoyable. However, because flow depends on a subjective evaluation of the chal-
challenges and one’s own skills, some persons will be dissatisfied even with potentially optimal employment.

Using a four-channel model, Csikszentmihalyi identified four challenge and skills contexts: anxiety, flow, boredom, and apathy. He defined them as follows:

1. **Anxiety** occurs when one’s perceived challenges are greater than one’s own mean score across all skill and challenge ratings for the week, and one’s perceived skills are less than one’s own mean score across all skill and challenge ratings for the week.

2. **Flow** occurs when one’s perceived challenges and skills are equal and both are greater than one’s own mean score across all skill and challenge ratings for the week.

3. **Boredom** occurs when one’s perceived challenges are less than one’s own mean score across all skill and challenge ratings for the week and skills are greater than one’s own mean score across all skill and challenge ratings for the week.

4. **Apathy** occurs when one’s perceived challenges and skills are both below one’s own mean score across all skill and challenge ratings for the week.

(“Antiflow” and concluded that “it appears that a complete restructuring of the job would be essential to decrease the sense of alienation that the blue collar workers feel in the work environment” (p. 124). The authors termed this experience “antiflow” and concluded that “it appears that a complete restructuring of the job would be essential to decrease the sense of alienation that the blue collar workers feel in the work environment” (p. 136).

LeFevre (1988) investigated flow during work and leisure in 107 subjects, including managers, engineers, clerical workers, and assembly workers. She found that persons’ occupations and activities were related to the amount of time spent in flow and the quality of experience and that, as the time spent in flow increased, persons reported an overall improvement in the quality of daily experiences. LeFevre concluded that “since flow enhances activation, concentration, and creativity, it is likely that performance would improve by increasing the amount of time spent in flow. In addition, increases in flow may improve morale and prevent burnout, since motivation and satisfaction are also enhanced” (p. 318).

Wells (1988) examined the association between flow and self-esteem in 49 working mothers. She found that “flow-like experiences can and do occur in all types of activities and with all groups of companions” (p. 340). Her research suggested that external constraints (e.g., the mother’s age, occupation, education, amount of time spent at work, and number of children) had no effect on flow. The author commented that “such findings are important because they show that it is possible to structure experience optimally despite clear external constraints” (p. 340). Thus, momentary variations in self-esteem may be associated with changes in the ratio between challenges and skills. For example, when challenges and skills are in balance, self-esteem is highest. However, Wells cautioned that these relationships do not prove causality.

Flow in occupational therapy is typically referred to in the occupational therapy literature and academic curriculum as the optimal experience or the “just-right” challenge (Carlson & Clark, 1991; Jackson, 1989; Primeau, Clark, & Pierce, 1989; Yerxa et al., 1989). Carlson and Clark (1991) noted that the theory of flow is an outstanding example of knowledge of occupation that is both genuine and documentably trustworthy—by drawing on Csikszentmihalyi’s findings, a therapist may more informatively select and recommend occupations for his or her patients that are likely to result in a flow experience, which is likely to enhance the patient’s subjective sense of well-being or decrease boredom. Overall, reference to this body of research should enable therapists to do more sophisticated activity analyses for the purposes of intervention. (p. 239)

Csikszentmihalyi and Csikszentmihalyi supported this premise: “Occupational therapy is another field where the model has had an impact and has informed the emerging field of ‘occupational science’” (1988, p. 12). Research by occupational therapists using flow theory is limited and the optimal flow experience has never been studied in occupational therapists (Jackson, 1989; Primeau et al., 1989; Yerxa et al., 1989).

More empirical studies are needed to expand the body of knowledge on flow for both clients and occupational therapy practitioners. To this end, the present study’s purpose was threefold: (a) to investigate what factors contribute most to flow in the sphere of work by occupational therapy practitioners, (b) to examine the relationship between flow and factors associated with flow, and (c) to examine the relationship between flow and factors associated with job satisfaction. Additionally, this study assessed the extent of flow experiences with working professionals (i.e., occupational therapy practitioners in a physical rehabilitation setting) and attempted to discover whether a larger sampling size would result in findings similar to those derived from Allison and Duncan’s (1988) pilot study.

**Method**

**Sample**

Ninety occupational therapy practitioners practicing in...
six physical rehabilitation environments in New England volunteered to participate in the study. Physical rehabilitation settings were selected because they required practitioners to work with various populations and use various types of evaluations and treatment approaches. All subjects resided and worked in the New England area. Approximately 75% of the subjects were between the ages of 23 and 32 years; 14% were between 33 and 42 years. The sample was skewed toward female subjects (94%). Sixty-nine percent of the subjects had 1 to 5 years of experience and approximately 17% had 6 to 10 years of experience. Eighty-two percent described themselves as clinicians and 4% as supervisors (see Table 1).

**Instruments**

Three instruments and a debriefing interview were used in this study: the Experience Sampling Form (ESF) (Csikszentmihalyi & Csikszentmihalyi, 1988; Prescott, Csikszentmihalyi, & Graef, 1976), the Job Descriptive Index (JDI) (Smith, Kendall, & Hulin, 1969), and Kunin Faces (cited in Fountain, 1975; Kunin, 1955). The ESF was used to measure the optimal flow experience and factors associated with it. The ESF asks about current challenges and skills in order to identify flow, about the quality of the experience, and about the kind of activity engaged in.

The Experience Sampling Method (ESM) uses electronic technology to study the subjective experiences of subjects interacting in their natural environments. The ESM is a refined form of the experiential sampling approach developed by Prescott et al. (1976). In this technique, the subject wears a programmable watch for a week that randomly emits seven signals daily. When the subject receives a beep, she or he is instructed to immediately complete an ESF.

The JDI and the Kunin Faces were used to measure extrinsic factors associated with job satisfaction. The JDI consists of 72 descriptive phrases or adjectives divided into five dimensions that give a score in each: Type of Work (18 items), Pay (9 items), Promotion Opportunities (9 items), Supervision (18 items), and Co-workers (18 items). Overall Job Satisfaction scores from the JDI have been described in the literature as having an alpha coefficient of internal reliability of .93 (Cook, Hepworth, Wall, & Warr, 1981).

The Kunin Faces is a brief, evaluative scale that measures eight aspects of job satisfaction: Overall, Nature of the Work Itself, Supervision, Pay, Promotions, Co-workers, the Profession of Occupational Therapy, and the Specific Place of Employment. The version used in this study provides for each dimension by using eight schematic faces with expressions ranging from highly pleased (broad smile) to highly displeased (deep scowl) (Fountain, 1975). Subjects were to place a check mark by the face that best described their feelings about that particular aspect of their work. Correlations (N = 252) of JDI subscales with Kunin Faces scores were reported by O'Reilly, Breton, and Roberts (1974) to be .74, .44, .41, .46, .45. The .74 correlation on the JDI Work Description Subscale, considered to be most closely associated with overall job satisfaction, suggests evidence of convergent validity. The Kunin Faces has also been used extensively as a validating criterion in job satisfaction research (Cook et al., 1981; Dunham & Herman, 1975; Fountain, 1975).

**Procedure**

Groups of 7 to 30 subjects were oriented to the study in sessions lasting from 10 to 60 min at each of the six facilities no more than 1 week before initiation of the ESM. At each orientation session, the investigator answered questions and explained the nature of the study, the use of the electronic devices (i.e., programmable watches), and the methodology.

Subjects used the ESM for a 5-day work week from Monday through Friday. They were paged randomly seven times per day during working hours (e.g., 9:00 a.m. to 5:00 p.m.; 7:30 a.m. to 3:30 p.m.; 8 a.m. to 4 p.m.). The watches were individually programmed for each subject with a random number table and the provision that no signals would occur within 15 min of each other. When paged, the subjects completed a two-page ESF contained in the 8 1/2 in. × 11 in. spiral-bound notebook they carried. Subjects were instructed to complete the ESF as soon as possible within 30 min of receiving each signal.

### Table 1

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>4.0</td>
</tr>
<tr>
<td>23-32</td>
<td>74.7</td>
</tr>
<tr>
<td>33-42</td>
<td>14.7</td>
</tr>
<tr>
<td>43-52</td>
<td>4.0</td>
</tr>
<tr>
<td>53 or older</td>
<td>2.6</td>
</tr>
<tr>
<td>(N = 75)</td>
<td></td>
</tr>
<tr>
<td>Number of years as an OT practitioner</td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>69.1</td>
</tr>
<tr>
<td>6-10</td>
<td>17.6</td>
</tr>
<tr>
<td>11 or more</td>
<td>13.3</td>
</tr>
<tr>
<td>(N = 68)</td>
<td></td>
</tr>
<tr>
<td>Occupational therapy career</td>
<td></td>
</tr>
<tr>
<td>First career</td>
<td>90.0</td>
</tr>
<tr>
<td>Career change</td>
<td>10.0</td>
</tr>
<tr>
<td>(N = 88)</td>
<td></td>
</tr>
<tr>
<td>Primary job description</td>
<td></td>
</tr>
<tr>
<td>Clinician</td>
<td>84.2</td>
</tr>
<tr>
<td>Supervisor</td>
<td>4.0</td>
</tr>
<tr>
<td>Administrator</td>
<td>2.6</td>
</tr>
<tr>
<td>Other</td>
<td>9.2</td>
</tr>
<tr>
<td>(N = 76)</td>
<td></td>
</tr>
</tbody>
</table>

Note. N differs because subjects did not complete all demographic information.
Sampled times were restricted to a 4-week period in October and November, between the hours of 7 a.m. and 7 p.m. Six facilities participated in the study.

Both the JDI and the Kunin Faces were self-administered by subjects at the conclusion of the last ESF on Friday. Both tests were contained in subjects’ notebooks. Within 1 week of testing, subjects were debriefed in an interview conducted by a research assistant knowledgeable about this study.

**Results**

Eighty-seven of the 90 subjects (97%) completed the 5-day ESM and 39 (43%) participated in the debriefing interview. For the ESM, attrition was primarily due to illness, technical problems (e.g., alarm watch or battery malfunction), or increased or unexpected work demands. For the interview, attrition was primarily due to increased or unexpected work demands and scheduling conflicts.

Subjects varied in their compliance rate, defined as completion of 90% of the ESF. Data inspection revealed that there was a compliance rate of 79.2% to the 3,150 signals sent and that subjects responded to 49.3% of the signals within 30 min. Because current experience was being studied, all ESFs completed more than 30 min after the signal were discarded. This reduced the number of observation points from 3,150 to 1,498.

Total ESF scores both from the beginning of the rating period (Monday, Tuesday, and half of Wednesday) and from the end (half of Wednesday, Thursday, and Friday) were obtained for each subject. Missing data were discarded. The totals, expressed in terms of a t-scale score, were based on the responses to 27 Likert-type scale items from the ESF. The median stability coefficient was $r = .53$. The results indicate moderate stability but should be viewed with caution.

Study results suggest that according to 87 occupational therapy practitioners working in physical rehabilitation settings, 78 of these persons experienced flow an average of 5.24 times over a 5-day work week, with a range of 1 to 12 times. When converted into percentiles according to the four channels developed by Csikszentmihalyi (1990), 23.2% of beeper responses fell into channel 2 (flow). Nearly 77% of the 1,498 beeper responses fell into nonflow categories: 44.1% fell into channel 1 (anxiety), 29.7% fell into channel 3 (boredom), and 3.0% fell into channel 4 (apathy).

Flow was experienced most often (23.6%) when a subject was working with a client in some type of intervention (see Table 2). Analysis of types of intervention revealed that the top-three types in which flow was experienced were when subjects were involved in neuromuscular skills intervention (e.g., range of motion, muscle tone, strength) (27.6%), during self-maintenance or self-care intervention (e.g., grooming, dressing, feeding, eating) (22%), and during motor skills intervention (e.g., fine motor coordination, visual motor integration, manipulation, and dexterity) (17.3%) (see Table 3).

During the debriefing interviews, subjects described their flow experiences by saying they felt “confident,” “creative,” “excited,” “productive,” “accomplished,” “proud,” “good,” “positive,” and “challenged”; and reported such moods as “alert,” “happy,” and “involved.” Perceived autonomy and self-esteem were high during a flow experience. Conversely, subjects in flow described their moods as occasionally “tense.”

The subject’s overall job satisfaction scores on the JDI and Kunin Faces were compared to the subject’s count of flow experiences over the 5-day study. Use of the Spearman’s rank correlation coefficient found no relationship between a subject’s score on either the JDI or the Kunin Faces and his or her count of flow experiences.

**Discussion**

**Flow Channel**

Factors associated with flow (high challenge, high skill) were measured over a 5-day work week with the ESM. Subjects experienced flow a relatively small amount of the time—an average of 5.24 times in a 5-day work week.

**Table 2**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>23.6</td>
</tr>
<tr>
<td>Documentation</td>
<td>18.4</td>
</tr>
<tr>
<td>Administration/Organization</td>
<td>13.4</td>
</tr>
<tr>
<td>Talking with Colleagues</td>
<td>11.4</td>
</tr>
<tr>
<td>Assessment</td>
<td>9.1</td>
</tr>
<tr>
<td>Attending Meetings</td>
<td>7.9</td>
</tr>
<tr>
<td>Other</td>
<td>5.6</td>
</tr>
<tr>
<td>Supervision</td>
<td>3.8</td>
</tr>
<tr>
<td>Transitioning</td>
<td>3.0</td>
</tr>
<tr>
<td>Socializing</td>
<td>2.6</td>
</tr>
<tr>
<td>Transportation</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Note: $k = 342$ beeps.

**Table 3**

<table>
<thead>
<tr>
<th>Intervention Activity</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuromuscular skills</td>
<td>27.6</td>
</tr>
<tr>
<td>Self-maintenance</td>
<td>22.0</td>
</tr>
<tr>
<td>Motor skills</td>
<td>17.3</td>
</tr>
<tr>
<td>Unspecified</td>
<td>7.4</td>
</tr>
<tr>
<td>Exercise</td>
<td>7.4</td>
</tr>
<tr>
<td>Education</td>
<td>6.1</td>
</tr>
<tr>
<td>Home management</td>
<td>4.9</td>
</tr>
<tr>
<td>Assistive technology</td>
<td>3.7</td>
</tr>
<tr>
<td>Caregiving</td>
<td>2.4</td>
</tr>
<tr>
<td>Vocational</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Note: $k = 81$ beeps.
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(23.2%). Csikszentmihalyi (1990) obtained a flow of 33% in a more diverse population. The nature of the subjects' work, which is subject to interpersonal tension from spending the majority of time in direct client contact (e.g., intervention activities), may in part explain the lower level of flow. Most subjects had relatively few years' experience in the field and may have had relatively less confidence in their skills. This situation might lead to a more stressful overall perception of the work environment (see below, “Anxiety Channel”).

The finding that flow was experienced most often (23.6%) when working with a client in some type of intervention is not surprising. The client population in a physical rehabilitation setting can vary greatly, thus the changing sets of intervention activities required from client to client may have provided new challenges for the practitioner. Further, within each set there may be great variability; for example, grading increasingly complex activities may have forced the occupational therapy practitioner to improve her or his skills.

The moods and attitudes reported by subjects when beeped during a flow experience (“alert,” “happy,” “involved,” “confident,” “creative,” “excited,” “productive,” “accomplished,” “proud,” “good,” “positive,” and “challenged”) were similar to those found by Csikszentmihalyi (1990). In his study, persons in flow described their moods as “strong,” “active,” “creative,” “concentrated,” and “motivated.” Subjects in flow also tended to describe their mood as “tense,” which may be related to the rigid productivity requirements and personnel shortage that they faced. Alternatively, their tension may reflect an inherent ambiguity in the definition or perception of the term “tense.” That is, a connotation that is either positive or negative may be attributed to the term, despite its use in the form of a paired adjective in the ESF.

Anxiety Channel

The high percentage (44.1%) of beeper responses in the anxiety channel (high challenge, low skill) was unanticipated. With higher productivity demands being placed on them in physical rehabilitation settings, subjects may have had to modify their provision of services, for example, from providing individual intervention to providing intervention to clients in large groups as a means of increasing productivity and profitability.

Another explanation of the high percentage can be attributed to the age or work experience of the subjects. The majority (74.7%) were between the ages of 23 and 32 years, in contrast to the national median age for occupational therapists of 36 years (American Occupational Therapy Association [AOTA], 1990). Further, the majority (69.1%) had less than 5 years of experience, which might have resulted in a mismatch between the experience levels of the practitioners and the high productivity demands of this work setting.

Alternatively, the high percentage of anxiety channel responses may be an artifact of the ESF and its use of the beeper. During the debriefing interviews, many subjects reported that the nature of their work (e.g., direct client care) made the beeper intrusive. Thus, the combination of the beeper and recording in the ESF seven times daily might have been sufficient to evoke anxiety channel responses.

Boredom Channel

The finding that boredom (low challenge, high skill) was experienced by subjects more often than flow may be explained by the repetitive nature of some intervention activities (e.g., activities of daily living, range of motion, and exercise). The following scenario described by a subject during the debriefing process illustrates the boredom experience: An occupational therapist practices in a physical rehabilitation setting that includes task variety and experimentation with the latest techniques in splinting and technological equipment. However, the majority of her (or his) direct client care requires a repetitive morning routine of client self-care or exercise activities. Upon reflection, the occupational therapist may recall that during the activity of client self-care (e.g., dressing), she or he felt a low challenge in comparison to skill level (i.e., boredom). Other activities that can contribute to boredom are attending meetings and doing administrative chores. The practitioner may consider these activities trivial relative to the major occupational focus (direct client care), but may be unable to avoid participation because they are integral to his or her job description. Interestingly, perceived autonomy and self-esteem were also high during potentially boring activities (low challenge, high skill). For example, during documentation, a solitary activity, a practitioner may perceive that she or he is autonomous (i.e., independent and in control) and thus report feeling good about herself or himself (i.e., high self-esteem).

Apathy Channel

The repetitive nature of some intervention activities also plays a role in the experience of apathy. The finding that apathy (low challenge, low skill) was experienced least by occupational therapy practitioners in the study, however, may be because the subjects rarely perceived their skill level as low. Consequently, it is not surprising that there was a low response in the apathy channel.

JDI and Kunin Faces

The lack of a relationship between a subject’s score on the JDI or on the Kunin Faces and his or her count of flow experiences suggests that extrinsic factors associated with job satisfaction are unrelated to the subject’s low or high count of flow experiences. These results support the findings of Lambert, who stated that “extrinsic character-
istics of the job are not believed to influence intrinsic motivation directly” (1991, p. 343). In addition, many of the questions asked in both the JDI and Kunin Faces are related to Herzberg’s job context (e.g., salary, supervision) (Herzberg, 1966, 1974). Herzberg (1966) wrote of a two-factor theory of job satisfaction in which satisfaction and dissatisfaction have separate and distinct causes known as motivators and hygiene. Motivators are associated with the person’s need for psychological growth and contribute to job satisfaction. Herzberg stated that the main factors (or motivators) involved in job satisfaction are advancement, achievement, recognition of achievement, possibility of growth, and the work itself. When these are absent or limited, the worker may experience no job satisfaction, but does not experience job dissatisfaction. Factors that Herzberg called hygiene factors are associated with job context (e.g., salary and supervision). When these hygiene factors are defective, the worker experiences job dissatisfaction. However, when these factors are adequate they do not lead to satisfaction: they lead to no job dissatisfaction.

The salary growth of an occupational therapy practitioner “was over 25% higher than the increase of consumer prices between 1985 [and] 1989” (Jaffe & Epstein, 1992, p. 74). Presently the national median salary of an occupational therapist in a physical rehabilitation setting is $38,000, which is at or slightly above the national median household income (AOTA, 1992). This fact suggests that the Herzberg hygiene factor of salary is adequate and leads to no job dissatisfaction.

Study Limitations

This study has various limitations in the design’s internal and external validity. Its use of a survey method is problematic because respondents may have given socially acceptable rather than candid responses. Its use of two instruments, the JDI and Kunin Faces, required retrospective information on job satisfaction. Further, because subjects were selected on the basis of their availability and interest, this sample cannot be compared to the entire occupational therapy population.

Controlling response timeliness is one possible measure of data validity (Hormuth, 1986). Csikszentmihalyi and Larson (1992) had a typically low rate of response delay in their study, whereas Hormuth (1985) reported a 90% response rate within 18 min of 5,145 signals in a study of 101 subjects. Comparable results were obtained by Pawlik and Buse (1982) with 86%, Csikszentmihalyi and Figurski (1982) with 80%, Savin-Williams and Demo (1983) with 78%, and Wells (1988) with 73%. The current study did not obtain similar results, which may be due to a variety of reasons revealed during the debriefing interviews. The most frequent cause of response delay was the type of activity engaged in when the signal occurred (e.g., activities with a client that could not be interrupted, such as transferring, toileting, or fabricating a splint). The second most frequent cause was technical problems (i.e., the watch did not emit the signal). Overall, subjects did not find the demands of the ESM to be very difficult, but did find them to be intrusive, particularly toward the end of the week.

Recommendations for Practice

Understanding the optimal flow experience and applying strategies to the workplace that enhance flow experiences may assist in retaining occupational therapy practitioners and may ultimately improve both their work productivity and the quality of intervention they provide their clients (Davis & Bordieri, 1988). LeFevre (1988) suggested that jobs be redesigned to increase workplace flow, with these changes, performance improves when the amount of time spent in flow increases. Increased flow may also improve morale and prevent burnout because flow enhances motivation and satisfaction (LeFevre, 1988).

In order to transform an activity into a flow experience, Csikszentmihalyi (1990) suggested the following:

- setting an overall goal with many subgoals
- using these goals to measure progress
- focusing continually on the task and making finer and finer distinctions in the challenges involved
- developing the necessary skills to maximize the available opportunities
- raising the rewards when the activity becomes tedious.

Because of the fast pace of change in today’s health care arena, professionals must reexamine their priorities by developing new techniques for managing health services (Jaffe & Epstein, 1992). It behooves the managers of occupational therapy programs and the practitioners themselves to incorporate the concept of flow into designs for future modifications of the work environment. For managers, orientation programs for newly hired occupational therapy practitioners should be an important aspect of the employment process and should emphasize an overview of the optimal flow experience and strategies to achieve it. By understanding optimal flow experience and using strategies to transform activities into flow experiences, occupational therapy practitioners may develop work patterns that are responsive to changing work conditions so as to retain job satisfaction in the process (Jaffe & Epstein, 1992).

Recommendations for Research

Further research on flow in occupational therapy practice should be done in other employment settings (e.g., industry, private practice, psychiatry, schools) to ascertain whether similar responses occur. Because productivity is
an important factor in the health care arena, the relationship of flow to the practitioner's productivity level should also be studied.

By using Csikszentmihalyi's results, therapists may recommend occupations that are more likely to help their clients experience flow, which would enhance their clients' subjective sense of well-being or decrease boredom. By referring to flow research, therapists may make their activity analyses for intervention purposes more sophisticated (Carlson & Clark, 1991). The nature and quality of flow among selected client populations (e.g., industrial injured workers or clients with chronic pain) should be studied. The use of ESM may help occupational therapy practitioners to better understand what interventions may facilitate flow in clients.

The usefulness of the ESM and electronic devices (e.g., programmable watches) can be clarified in future studies. Although the literature has reported relatively little intrusiveness in this methodology, the subjects of this study found the opposite to be true. Reducing paging from seven to five times per day may decrease intrusiveness. By comparing ESF items answered in less than 30 min with those answered after that interval, future researchers may discover that "any difference may be due to situational characteristics that made an immediate response difficult, or indicate that the situation was not determined randomly by the signal but rather by the subject based on criteria unknown to the investigator." (Hormuth, 1986, p. 282). Future research might also examine the effect of factors outside the workplace on job satisfaction. Suspected relationships between job satisfaction and nonwork environments (i.e., home) can be further explored in a more rigorous manner with the ESM.

Conclusion

This article described a study that examined the nature and quality of flow in the work experiences of occupational therapy practitioners employed in physical rehabilitation settings. The basic premise of this study was that job satisfaction overall is declining. Declining job satisfaction is evidenced by the increased attrition rate. The findings suggest that extrinsic factors associated with job satisfaction are leading to no job dissatisfaction, and that flow, a form of intrinsic job satisfaction, was experienced for a relatively small amount of time.

Acknowledgments

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