Burnout in
Occupational Therapists
and Physical Therapists
Working in Head Injury Rehabilitation

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Key Words: inservice training • job satisfaction (attitude)

Objectives. Burnout has been linked to job retention in occupational therapy, physical therapy, and other health professions. Professional development activities are often suggested to reduce burnout, but little empirical evidence supports this contention. This study explored the prevalence of burnout among occupational and physical therapists working in head injury rehabilitation and evaluated the relationship between burnout and professional development activities.

Method. Forty therapists working full-time in head injury rehabilitation were surveyed. Correlations between subscale scores of the Maslach Burnout Inventory (i.e., Emotional Exhaustion, Depersonalization, and Personal Accomplishment) and responses to a survey of professional development activities are reported.

Results. Professional development activities are most strongly associated with feelings of personal accomplishment. Emotional exhaustion was relatively high among these therapists, but few feelings of depersonalization were evident.

Conclusions. Professional development activities in the workplace may augment feelings of personal accomplishment and minimize burnout as an issue in job retention. Strategies to effectively identify and manage therapists' feelings of emotional exhaustion require further study.

Technological advances in the acute medical evaluation and treatment of traumatic head injury have contributed to a dramatic increase in the number of survivors (National Advisory Council, Neurological Disorders and Stroke, 1990). Unfortunately, many rehabilitation facilities are currently struggling to employ an adequate number of well-qualified occupational therapists and physical therapists to meet the needs of clients with head injuries ("Report Cites Shortage," 1989; Russell, 1990; Saltzman, 1989; Silver, 1990).

Developing and retaining therapists in specific arenas of practice can be problematic. In a recent survey study, Bailey (1990) investigated several reasons for attrition from occupational therapy and found that burnout was cited by 29% of those therapists sampled (N = 696) as the reason for attrition.

Therapists do not choose to become burned out. It is a condition that is directly related to the nature of their job. According to Muldary (1983), burnout is a consequence of unrelieved work stress, a condition that is especially prominent among health professionals.

The study of burnout had its beginnings in the mid-1970s with the work of a small number of researchers (Freudenberg, 1975; Maslach, 1976; Maslach & Jackson, 1979; Maslach & Pines, 1977). These researchers identified the phenomenon of burnout as a major concern in the physical and mental health of human service profes-
sionals. Maslach developed a standard definition for burnout (1982):

Burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do “people work” of some kind. It is a response to the chronic emotional strain of dealing extensively with other human beings, particularly when they are troubled or having problems. Thus, it can be considered one type of job stress. What is unique about burnout is that the stress arises from the social interaction between helper and recipient. (p. 3)

Emotional exhaustion is characterized by a loss of psychological and physical energy; “as emotional resources are depleted, workers feel they are no longer able to give of themselves at the psychological level” (Maslach & Jackson, 1986, p. 1). Depersonalization is “a state in which the helping professional no longer has any sympathy, respect, or positive feelings for clients” (McGee, 1989, p. 345). The helping professional develops cynical, callous, or even dehumanizing attitudes toward clients, which can have a substantially negative effect on quality of care issues. Reduced personal accomplishment refers to negative self-evaluation and a feeling of futility regarding one’s role in the workplace.

Pines and Aronson (1988) outlined theoretical causes of burnout that are directly related to the relationship between the professional and the client. These causes include the extent to which interactions are emotionally taxing and personality characteristics of the professional. Maslach and Jackson (1982) theorized an additional cause of burnout that also has a direct impact on the professional–client relationship: the stress of decision making. Each of these three theoretical causes of burnout can be applied to the occupational therapist or physical therapist working in head injury rehabilitation.

Emotionally taxing interactions with clients are inherent among those working in head injury rehabilitation. Clients present with a number of unique symptoms that therapists must contend with: daily disorientation, decreased memory, emotional lability, impulsivity, agitation, and denial. Gans (1983) described clients with these symptoms as living “in a world devoid of the civilizing rudiments of ordinary social intercourse are missing” (p. 178). Although the atypical interactions that result from the clients’ symptoms could singularly fulfill the requirement of “emotionally taxing,” therapists must also bear the strain of daily encounters with families in crisis. Therefore, therapists are constantly confronted with emotionally charged situations, the cumulative effects of which can contribute to the development of burnout.

Reportedly, therapists have many personality characteristics in common: they tend to be empathetic, idealistic, committed to assisting those who are disabled, and altruistic (Emener, 1979; Osborn, Badick, & Davis, 1988; Pfeifferling, 1984; Pines & Aronson, 1988). The very attributes that are desirable in human service professionals create a level of vulnerability that makes them highly susceptible to burnout.

Lack of self-confidence and an inadequate knowledge base may be factors that contribute additional stress to the decision-making process. If so, many of the strategies advocated for dealing with burnout may better equip therapists with tools to expand their knowledge base and increase self-confidence. These strategies include professional development activities such as in-service and continuing education seminars (Croft, 1987; Ford, 1983; Goodykoontz & Herrick, 1990; Lang & Slayton, 1984; Macinick & Macinick, 1990), mentor relationships (Galbraith, Brueggemeyer, & Manweiler, 1988; Richman, Brodish, Haas, & Billings, 1989), opportunities for consultation with colleagues (Bollie, 1988; Kang, Snyder, Spietz, Johnson-Crowley, & Lindner, 1987; Pines & Kanner, 1982; Richmond, 1986), career ladders (Maslach & Florian, 1988; Patrick, 1984), and membership in professional organizations (Graham, 1982).

Although these strategies are frequently recommended for minimizing the risk of burnout, there is no empirical evidence to support their effectiveness. Additionally, existing studies identifying burnout in occupational therapists and physical therapists have demonstrated variable levels of burnout in those professionals (Broilier, Bender, Cyranowski, & Velletri, 1987; Deckard & Present, 1989; Donohoe, Nawawi, Wilker, Schindler, & Jette, 1993; Rogers & Dodson, 1988; Schuster, Nelson, & Quisling, 1984; Sturgess & Paulsen, 1983), have flaws in sampling methods, or have restricted conditions that limit the generalization of the results to other practice settings. Therefore, the purpose of this study was to investigate the relationship between burnout and the professional development activities of occupational therapists and physical therapists working in head injury rehabilitation.

Method

Sample

Thirty rehabilitation facilities were identified that treat clients with head injuries in metropolitan areas of the Pacific Northwest. Permission was obtained from managers of the occupational therapy and physical therapy departments for each facility to attend staff meetings at each facility. The purpose of these meetings was to initiate data collection procedures with the therapists who met the following sample criteria: at least 1 year of employment as a therapist; a full-time work schedule; and more than 50% of their caseload consistently composed of clients with head injuries. Ten of the 30 facilities employed the 42 therapists who met the sample criteria. One therapist resigned before data collection began, and one therapist returned an incomplete survey packet. Therefore, the total sample included 40 therapists (21 occupational therapists and 19 physical therapists) (see Table 1).
Table 1
Characteristics of Sample

<table>
<thead>
<tr>
<th>Sample Variable</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>38 (95.0)</td>
</tr>
<tr>
<td>Male</td>
<td>2 (5.0)</td>
</tr>
<tr>
<td>Profession</td>
<td></td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>21 (52.5)</td>
</tr>
<tr>
<td>Physical therapist</td>
<td>19 (47.5)</td>
</tr>
</tbody>
</table>

Note. N = 40
Age: M = 32.5, SD = 6.3
Years as a therapist: M = 6.7, SD = 3.3
Years at present job: M = 5.6, SD = 3.7

Instrument

Burnout was measured with the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1986), a self-administered, standardized measure containing 22 statements of job-related feelings to which respondents indicate frequency of experiencing burnout on a scale of 0 (never) to 6 (every day). Scoring procedures resulted in three separate subscale scores: Emotional Exhaustion, Depersonalization, and Personal Accomplishment. A high degree of burnout is reflected by high scores on the Emotional Exhaustion and Depersonalization subscales and a low score on the Personal Accomplishment subscale. Average scores on all three subscales indicate an average degree of burnout. A low degree of burnout is indicated by low scores on the Emotional Exhaustion and Depersonalization subscales and a high score on the Personal Accomplishment subscale. A number of studies have shown acceptable reliability and validity of the MBI (Green & Walkey, 1988; Laho & Mason, 1989; Maslach & Jackson, 1986; Pierce & Molloy, 1989).

Biographical information regarding professional development activities was obtained through an additional survey developed by the authors. The survey requested descriptive information including professional title, professional memberships, career advancement opportunities, in-service education opportunities, mentoring experience, number of continuing education activities, percentage of employer funding for continuing education, and number of continuing education presentations given. The survey also included three open-ended questions welcoming the subjects’ comments on job-related feelings, professional development activities, and any other issues they wanted to mention. These items were pilot tested and found to be satisfactory.

Procedure

The first author traveled to 9 of the 10 facilities to collect data. Consent forms and questionnaire packets were mailed to the remaining facility.

Data Analysis

Descriptive statistics for the three MBI subscale scores for this sample were calculated to be compared with the normative scores presented in the MBI manual (Maslach & Jackson, 1986). In addition, cross-tabulation procedures were conducted to evaluate the number of therapists experiencing low, average, and high degrees of burnout.

Spearman rank order correlations were calculated to evaluate the direction and magnitude of the relationships between the variables. Twenty-seven correlation coefficients were generated; this relatively large number of calculations may have increased the likelihood of statistical significance occurring simply by chance. Consequently, the .01 level was established to signify relationships that were able to meet more stringent criteria. Results significant at the .05 level should be considered with caution.

Independent t tests were used to test differences in burnout subscale scores among therapists who did and did not (a) have a mentor relationship (i.e., someone who serves as a career role model and who actively advises, guides, and promotes another’s career and training [Vance, 1982]), (b) work in a facility that provided career advancement (e.g., career ladder) opportunities, or (c) work in a facility that provided in-service education opportunities. In an effort to reach a compromise between the need to reduce the effects of the Type I error potential and the need to maintain experimental power, the alpha level was set at .01 for those analyses. With an alpha level of .01, the planned experiment wise error potential for the nine independent t tests is an acceptable level of .01 times 9, or less than 9%.

Results

On average, the subjects displayed high levels of feelings of personal accomplishment, average levels of emotional exhaustion, and low levels of depersonalization. Scores on each subscale of the MBI are displayed in Table 2. For comparison, the descriptive statistics of the overall normative sample (N = 11,067) and the medical normative sample (N = 1,104) from the MBI manual are included as well as the criteria for high, average, and low scores for each subscale (Maslach & Jackson, 1986).

Cross-tabulations of Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscale scores are displayed in Table 3. The numbers in the top left region of the table represent subjects experiencing low degrees of burnout, and the numbers in the lower right region of the table represent those experiencing high degrees of burnout. For the Emotional Exhaustion subscale, 17 subjects (42.5%) scored in the high category, 15 (37.5%) in the average category, and 8 (20%) in the low category. For the Depersonalization subscale, 4 subjects (10%) scored in the high category, 13 (32.5%) in the average category, and 23 (57.5%) in the low category. For the Personal Accomplishment subscale, 26 subjects (65%)...
Table 2
Maslach Burnout Inventory Subscale Scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Subscale</th>
<th>M (SD)</th>
<th>Depersonalization</th>
<th>M (SD)</th>
<th>Personal Accomplishment</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapists in head injury rehabilitation</td>
<td>Emotional Exhaustion</td>
<td>25.4 (9.4)</td>
<td>6.4(3.7)</td>
<td>39.4(4.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N=40)</td>
<td>Depersonalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBI medical normative sample</td>
<td>Emotional Exhaustion</td>
<td>22.2 (9.5)</td>
<td>7.1 (5.2)</td>
<td>36.5(7.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N=1,104)</td>
<td>Depersonalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBI total normative sample</td>
<td>Emotional Exhaustion</td>
<td>21.0(10.6)</td>
<td>8.7(5.9)</td>
<td>34.6(7.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N=11,067)</td>
<td>Depersonalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. MBI = Maslach Burnout Inventory

Table 3
Degrees of Burnout: Cross-Tabulation for Number of Subjects Scoring Low, Average, and High on Each MBI Subscale

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Low</th>
<th>Average</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Personal Accomplishment</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Average Emotional Exhaustion</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>High Emotional Exhaustion</td>
<td>7</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Average Personal Accomplishment</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Low Emotional Exhaustion</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>High Emotional Exhaustion</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Low Personal Accomplishment</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Average Emotional Exhaustion</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>High Emotional Exhaustion</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note. Numbers in top left region of the table represent respondents experiencing low degrees of burnout. Numbers in the lower right region of the table represent respondents experiencing high degrees of burnout.

The mean score for the Emotional Exhaustion subscale was 26.38 (in the high category) for occupational therapy subjects and 24.21 (in the average category) for physical therapy subjects. Depersonalization subscale mean scores were almost equal at 6.71 for occupational therapists and 6.10 for physical therapists (both in the low category). Personal Accomplishment subscale mean scores were 38.43 for the occupational therapists and 40.37 for the physical therapists (both in the high category).

In the survey, one recurrent theme expressed by subjects was the importance and positive effect of team support. One subject summarized this sentiment by stating that the "team of occupational therapy, physical therapy, psychology, medicine, and nursing is what keeps me sane . . . We meet daily to discuss patient behaviors and one time per week to discuss how we are coping." Another theme regarded the positive effects of the challenge of treating clients with head injuries. A challenging environment was said to provide more opportunities for professional growth and creativity, which, some subjects claimed, prevented them from burning out. Finally, the importance of professional development was alluded to in many comments. Several subjects were dissatisfied with the limited funding available for continuing education opportunities, others were discouraged by a lack of time to keep up on professional literature. One subject summarized this frustration by stating: "I get mixed messages encouraging professional growth — to do it, but on my own time and at my own expense."

Resulting correlational analyses between MBI subscale scores and professional development variables are shown in Table 4. Relationships that achieved statistical significance at the criterion level were the correlations of personal accomplishment with consultations (i.e., frequency of consultation with colleagues), total number of presentations (i.e., continuing education), and total years at present job. Three other correlations between professional development activities and personal accomplishments were significant at the .05 level (i.e., continuing education, journal articles read, and total years as a therapist). An inverse correlation between total years at present job and emotional exhaustion was also significant at the .05 level.

Multiple t tests used to test for major differences in MBI subscale scores for categorized mentor relationships and career ladder groupings are summarized in Table 5. In-services provided by the facility were reported by 90% of the sample (n = 38); therefore, analysis of differences was not practical. In terms of other workplace offerings, no major differences were found between the six pairs of MBI subscale scores. It appears that the presence of mentor and career advancement opportunities did not strongly relate to the levels of burnout that these subjects experienced.
Table 4

Spearman Correlations for MBI Subscale Scores With Professional Development Activities and Years of Experience

<table>
<thead>
<tr>
<th>Variable</th>
<th>Emotional Exhaustion</th>
<th>Depersonalization</th>
<th>Personal Accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing education</td>
<td>-.08</td>
<td>-.13</td>
<td>.31*</td>
</tr>
<tr>
<td>Funding for continuing education</td>
<td>.07</td>
<td>.04</td>
<td>.22</td>
</tr>
<tr>
<td>Journal articles</td>
<td>-.08</td>
<td>-.12</td>
<td>.28*</td>
</tr>
<tr>
<td>Consultations</td>
<td>-.01</td>
<td>.07</td>
<td>.39**</td>
</tr>
<tr>
<td>Undergraduate preparation</td>
<td>.14</td>
<td>.23</td>
<td>-.11</td>
</tr>
<tr>
<td>Professional memberships</td>
<td>.01</td>
<td>.01</td>
<td>.24</td>
</tr>
<tr>
<td>Total number of presentations</td>
<td>.01</td>
<td>-.04</td>
<td>.44**</td>
</tr>
<tr>
<td>Total years as a therapist</td>
<td>-.13</td>
<td>-.14</td>
<td>.55*</td>
</tr>
<tr>
<td>Total years at present job</td>
<td>-.36*</td>
<td>-.17</td>
<td>.60**</td>
</tr>
</tbody>
</table>

Note: MBI = Maslach Burnout Inventory
*p < .05
**p < .01

Discussion

Burnout Scores

As a group, occupational therapists and physical therapists in this study who work in head injury rehabilitation tend to experience higher emotional exhaustion, lower depersonalization, and notably higher personal accomplishment than the total MBI norm reference group of human service professionals and the norm group of medical professionals. On the Emotional Exhaustion subscale, 42.5% of the subjects scored in the high category, whereas only 20% scored in the low category. This finding supports Gans’s (1983) premise that despite therapists’ “intellectual understanding of the neurological basis of patient behavior, and their remarkable patience and concern, the cumulative effect of [the behaviors displayed by patients with head injuries] is devastating” (p. 178). However, as evidenced by the high mean score for the Personal Accomplishment subscale and the high percentage of subjects scoring in the high category (65%), it appears that the therapists in this study may counteract these potentially devastating effects with a profound sense of personal accomplishment. They tend to maintain a strong commitment to their jobs, evaluate their professional performance positively, and recognize that their therapeutic efforts are not futile.

The pattern of Emotional Exhaustion and Personal Accomplishment subscale scores from this sample may also be interpreted in a more disconcerting light. Although the test authors warned against using the MBI for diagnostic purposes (Maslach & Jackson, 1986), Eisenstat and Felner (1984) claimed that the combination of high Emotional Exhaustion and high Personal Accomplishment subscale scores could indicate that although they are not burned out, therapists may be “burning up” (p. 426). From this perspective, it is the combination of high emotional exhaustion and a high sense of personal accomplishment that is dangerous and could lead to burnout. The ideal, therefore, would be to maintain a strong sense of personal accomplishment while limiting feelings of emotional exhaustion.

Emotional Exhaustion and Professional Development

All correlations for emotional exhaustion and professional development activities were close to zero, suggesting that professional development activities have a negligible impact on the amount of emotional stress therapists experience while working with clients with head injuries. Emotional Exhaustion subscale scores have a significant inverse relationship with years of experience at the present job. It may be that as therapists gain more experience in head injury rehabilitation, their feelings of emotional exhaustion decrease. However, it is also possible that experienced therapists are held accountable for a number of other responsibilities in addition to client treatment. Experienced therapists may be more involved in non-client-related activities such as program development, student supervision, or staff education. These activities may limit opportunities for experiencing emotional stress, resulting in the inverse relationship between years of experience in head injury rehabilitation and emotional exhaustion.

Depersonalization and Professional Development

The low correlations between these variables suggest that professional development is not related to one’s ability or tendency to maintain sympathy, respect, and posi-

Table 5

Summary of t Tests Comparing Mentor Relationships and Career Ladder With MBI Subscale Scores

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Emotional Exhaustion</th>
<th></th>
<th>Depersonalization</th>
<th></th>
<th>Personal Accomplishment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentor relationships</td>
<td></td>
<td>M</td>
<td>SD</td>
<td>p</td>
<td>M</td>
<td>SD</td>
<td>p</td>
</tr>
<tr>
<td>Yes</td>
<td>23</td>
<td>25.7</td>
<td>9.6</td>
<td>.79</td>
<td>6.7</td>
<td>4.2</td>
<td>.60</td>
</tr>
<tr>
<td>No</td>
<td>17</td>
<td>24.9</td>
<td>9.5</td>
<td></td>
<td>6.1</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>Career ladder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>21</td>
<td>25.6</td>
<td>6.7</td>
<td>.23</td>
<td>6.2</td>
<td>4.3</td>
<td>74</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>27.3</td>
<td>11.6</td>
<td></td>
<td>6.6</td>
<td>5.1</td>
<td></td>
</tr>
</tbody>
</table>

Note: MBI = Maslach Burnout Inventory
With so few therapists in this sample having high depersonalization scores, clear relationships with professional development or with other personality factors are not yet clear. Greater depersonalization found in longitudinal or serial evaluation of burnout would be of concern.

Personal Accomplishment and Professional Development

With one exception—undergraduate preparation—the correlations between personal accomplishment and all professional development variables were positive. The highest correlation coefficient resulted from the comparison between Personal Accomplishment subscale scores and total number of professional presentations. The combination of presenting instructional information to peers at the workplace (e.g., in-services) and to other professionals at conferences, seminars, courses, or workshops appears to have a substantial impact on feelings of personal accomplishment. Presenters may receive a substantial amount of positive reinforcement regarding their professional credibility from the audience or simply from the fact that people are interested enough in what the presenter has to say to attend the presentation. The higher correlation of this variable with personal accomplishment than with the number of continuing education activities attended seems to indicate that the challenges and preparation process inherent in presenting provide more opportunities for positive professional self-evaluation than just attending a presentation.

One of the three highest correlation coefficients was that of Personal Accomplishment subscale scores with the frequency of consultation with colleagues. The more frequently therapists consulted with colleagues regarding treatment strategies for clients with head injuries, the more positively they evaluated their professional performance. Many therapists in this sample confirm the relevance of this finding with their written comments (discussed earlier) regarding the importance of team support. This result provides empirical support for the recommendation by Kang et al. (1987) that a colleague's active, reflective listening and brainstorming assist therapists in organizing their thinking and in developing ways to help clients and families. This type of consultation may also help therapists evaluate their effectiveness more realistically.

Consultation with colleagues appears to have an impact on feelings of personal accomplishment. This finding is consistent with Donohoe et al.'s (1993) proposal that several factors, especially communication, connectedness, and achievement, account for the variance in burnout among physical therapists. The absence of consultation and professional dialogue may foster the development of a burnout pattern.

The relationship between feelings of personal accomplishment and professional development is also consistent with Bush, Powell, and Herzberg's (1993) suggestion that a clinician's sense of career self-efficacy (i.e., meeting expectations of competency and career growth) may promote job satisfaction and professional retention. Personal Accomplishment subscale scores had relatively high correlations with years of experience as a therapist and years of experience in head injury rehabilitation. Although as a group this sample scored in the high category for personal accomplishment, therapists with fewer years of experience tended to have lower personal accomplishment scores. Reduced feelings of personal accomplishment include a more negative professional self-evaluation and a viewing of one's efforts in the workplace as futile. This result for less experienced therapists may be a reflection of the idealism of the relatively large number of novice therapists in this sample and the effect that "reality shock" (p. 68) can have on them (Pfifferling, 1984). Novice therapists become frustrated by the discovery that the idealistic therapeutic solutions presented to them in the classroom do not always work in the real world. Because their unrealistic expectations for client recovery are frequently not met, novice therapists may perceive their professional skills as ineffective and their efforts as futile.

Another possible explanation for the relationship that resulted between personal accomplishment and years of experience may have to do with the daily activities of experienced therapists. Several studies have reported a strong positive correlation between burnout and hours of direct treatment (Broilier et al., 1987; Lewiston, Conley, & Blessing-Moore, 1981; Maslach & Jackson, 1982). Although all subjects worked full-time and 50% of each therapist's caseload was made up of clients with head injuries, experienced therapists may have been involved in other, non-client-related activities during their workday. For experienced therapists, it may be these non-client-related activities that contribute to the tendency toward positive professional self-evaluation and an increased sense of personal accomplishment.

Correlation coefficients for Personal Accomplishment subscale scores with number of continuing education activities and frequency of reading journal articles were moderately high. This finding appears to provide some support for the premise that particular professional development activities increase therapists' knowledge base and provide a sound foundation for professional self-confidence. Therapists who participate in these activities and are aware of a wide variety of treatment options may feel more confident that their clients receive effective, quality treatment. It appears that limited opportunities for continuing education and reading journal arti-
articles may contribute to therapists feeling less competent and, subsequently, may result in a higher degree of burnout.

Conclusion
A high percentage of the therapists in this sample displayed a considerable amount of emotional exhaustion and, as a group, they tended to have very strong feelings of personal accomplishment. This pattern suggests that these therapists may be at risk for "burning up." Therefore, although therapists in this sample were not completely burned out, occupational therapy and physical therapy managers should consider the long-term implications of the pattern of feelings that the therapists display.

The results of this study provide substantive evidence for managers who struggle to justify financial support for a number of professional development activities. For example, to the extent that this sample represents therapists working in head injury rehabilitation, a notable relationship exists between feelings of personal accomplishment and several professional development activities. These activities include number of professional presentations given, frequency of consultation with colleagues, frequency of reading journal articles, and number of continuing education activities attended. Unfortunately, occupational therapy and physical therapy managers in rehabilitation facilities are often under substantial administrative pressure to enforce strict staff productivity quotas. Any time spent preparing for or giving presentations, consulting with colleagues, attending conferences, or reading journal articles is considered nonbillable time for staff members. However, the results of this study provide a sound rationale for the establishment of opportunities for staff members to participate in professional development activities. Therapists from this sample who engaged in these activities tended to have a higher sense of personal accomplishment. Therapists experiencing higher degrees of personal accomplishment may be more likely to remain at the workplace than those experiencing a lesser sense of personal accomplishment. This rationale may assist managers when they are forced to weigh the long-term benefits of staff retention against the short-term benefits of productivity.

Although the results of this study suggest that particular professional development activities may be instrumental in the reduction of a high degree of burnout, it is important to recognize that these activities have a direct relationship with only one aspect of burnout, personal accomplishment. Program development efforts aimed only at increasing staff members' feelings of personal accomplishment could be more harmful than helpful. As noted earlier, a pattern of considerable emotional exhaustion and strong feelings of personal accomplishment may lead therapists to burn up. Ignoring feelings of emotional exhaustion while promoting opportunities for professional development may facilitate the tendency toward burning up. Therefore, it is recommended that program development efforts to reduce burnout include activities to increase feelings of personal accomplishment coupled with strategies to decrease feelings of emotional exhaustion. Development of strategies to decrease emotional exhaustion requires further study of workplace factors and the personal and professional characteristics of those therapists who work toward the rehabilitation of persons with head injury.

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