Burnout amongst Physiotherapists in Ishikawa Prefecture

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Abstract. Professionals working in human-related services have been found to suffer burnout to an increasing degree, which, in turn, affects their work performance, and the reason for it is often due to excessive work-related pressure. Using the Japanese version of the Maslach Burnout Inventory (JMBI), this study investigated various factors associated with burnout among physiotherapists from the prefecture of Ishikawa in Japan, and the results were analysed to understand the relationship among these factors. Out of 243 practising physiotherapists surveyed throughout the prefecture, 163 met the established criteria for inclusion in the study. The scores for personal accomplishment were significantly lower than those of physiotherapists in the United States, but significantly higher than nurses in Japan (p<0.001). The factor analyses revealed that statements belonging to each factor described the specific concepts. A positive correlation was demonstrated between Factor 4 and age of the therapist and Factor 4 and therapist’s number of years of practice (p<0.05), Factors 2 and 4 and the number of years at present employment (p<0.01), and Factor 4 and the therapist’s time spent for clients (p<0.01). As for the gender difference for the JMBI, male respondents’ scores were high for Factors 2 and 4 (p<0.01). Possible reasons for and implications of these findings are discussed in terms of recognition of the factors which contribute to burnout.

Key words: Burnout, Japanese Version of the Maslach Burnout Inventory, Physiotherapists.

INTRODUCTION

“Burnout is feeling emotionally, intellectually, and physically drained day after day until you move beyond exhaustion and into a state of feeling numb.” You feel as if your energy fuel tank is operating on empty. Burnout is most frequently associated with diminished self-worth, work aversion and loss of empathy, and has become the chief centre of attention concerning occupational stress response among professionals delivering human services. Burnout is a serious problem resulting in an aversion to work and a lowering in quality of care, which affects not only clients but also the people associated within the work environment. So it is important to recognise causative factors of burnout and prevent their outcome. There have been a sizable number of research papers on this subject in Japan, particularly focused on nurses, but there is a dearth of burnout research on physiotherapists. Most of a physiotherapist’s work schedule involves a close working relationship with the client, and so physiotherapists are highly likely to become prime candidates for burnout.

This study was carried out to determine which factors are associated with burnout. The significance of the study was to collect pertinent...
information enabling groundwork for early intervention strategies to prevent burnout syndrome in Japanese physiotherapists.

METHODS

Sample
Two hundred and forty-three respondents were selected from a convenience sample of physiotherapists practising in Ishikawa Prefecture. Because of the relative smallness of the total membership in the prefecture, almost all of the members were selected. The physiotherapists who were excluded from this study were those who were either involved in teaching and research or were inactive at the time of the survey.

Instrument
The survey consisted of demographic data on the respondents and the use of the Japanese version of the Maslach Burnout Inventory (JMBI). The original Maslach Burnout Inventory (MBI), has been used internationally since its conception. The demographic section included questions on age, gender, average number of clients treated per day, time spent on daily client care, number of years as a practising physiotherapist and also the number of years in current employment. The MBI consists of 25 items and provides a measure of degree of burnout in terms of three subscales: emotional exhaustion, depersonalisation, and dissatisfaction with personal accomplishment. Emotional exhaustion (EE) means being overextended and exhausted by work; depersonalisation (DP) is an unfeeling and impersonal response towards recipients receiving care or services; and the personal accomplishment (PA) subscale contains items that describe feelings of competence and success of achievement working with people.

Each one of the 25 items is rated from a two-dimensional aspect: frequency and severity. The frequency rating ranges from 1 (a few times a year), 2 (monthly), 3 (a few times a month), 4 (every week), 5 (a few times a week) to 6 (every day). The severity rating ranges from 1 (not much), 4 (moderately) to 7 (severely). People with higher scores on the EE and DP subscales and lower scores on the PA subscale were categorized as highly burned out candidates. The JMBI has been shown to have as high a reliability and validity as that of the original MBI. However, the reliability of response for the severity dimension in the original MBI is weak, so that the use of response in the frequency dimension is recommended. Although, in this study, the respondents were asked to supply answers for the two dimensions, responses for the frequency dimension only were analysed. Further, Maslach recommended that items 23, 24 and 25 be regarded as optional, and, therefore, most research projects are conducted without them. Accordingly, only 22 items were used in this study.

Procedure
Surveys were mailed to the individual respondents with a letter of explanation concerning the purpose of the study, together with a stamped addressed return envelope. The questionnaires were anonymous but contained a code, which would enable mailed reminders to be posted, if necessary. This was, nonetheless, not required.

Statistics
The item scores of the JMBI were calculated on a scale of zero to six, where an answer of never counted for zero points and an answer of every day counted for six. Specifically, the mean score with standard deviation for the subscales were calculated, and, using Student’s t test, the results were compared with those of Japanese nurses and American physiotherapists. The factor analysis was, then, carried out to compare it with the factor structure of the original MBI, and also by the principal factoring method with orthogonal (varimax) rotation. The details of this procedure can be found elsewhere. The score for each factor of EE ranged from 0 to 54 points, 0 to 30 points for DP, and 0 to 48 points for PA, respectively. Further, Cronbach’s alpha coefficients for each subscale were calculated for assessing internal consistency reliability. Items with more than 0.5 factor loadings were added, then divided by the number of items for each subscale score. Finally, correlation coefficients were calculated to determine the effect of respondents’ background on burnout, and also Student’s t test was used to determine whether there were gender differences in the JMBI scores. All statistical analyses were performed by means of a statistical programme package, StatView. An alpha level of 0.05 was
selected for statistical significance.

RESULTS

Rate of response and the characteristics of the respondents

The rate of return was 79.0% (192 respondents), of which 29 incomplete questionnaires were excluded from the analysis. Thus, the final sample consisted of 163 respondents (effective response rate of 67.1%), comprising 52.1% female (n=85) and 47.9% male (n=78). Mean (SD; range) age of the respondents was 31.2 (7.7; 21–61) years, and mean (SD; range) years as physiotherapists were 8.8 (6.8; 0.6–30.7). Mean (SD; range) working years at present employment were 6.1 (5.6; 0.6–30.7). Seventy-six point seven (76.7)% of the respondents spent more than 80% of their time treating clients per day.

Score of the JMBI

Mean (SD; range) score for EE was 25.42 (11.37; 2–54), DP 8.21 (7.66; 0–30), and PA 29.74 (9.08; 10–48). When comparing the factors of PA with those for the American physiotherapists (mean: 37.26; SD: 8.46) and Japanese nurses (mean: 24.77; SD: 13.37), the former scored significantly higher and the latter significantly lower than the physiotherapists from Ishikawa. The higher score for EE and DP and the lower score for PA reflect a higher degree of burnout. These results are shown in the form of a bar graph (Fig. 1).

Factor analysis

Four factors emerged before carrying out varimax rotation by assigning the eigenvalue at more than 1.0. The eigenvalue for each factor was 5.3 for Factor 1, 2.9 for Factor 2, 3.1 for Factor 3, and 2.4 for Factor 4, respectively. The factor loading for each item after varimax rotation is shown in Table 1, in which mesh-covered columns show that the items with factor loading of more than 0.5 belong to respective factors. Cronbach’s alpha coefficients were 0.91 for Factor 1, 0.77 for Factor 2, 0.81 for Factor 3, and 0.74 for Factor 4, which confirmed that the items belonging to each factor measured, on the whole, the specific concept.

Factors affecting burnout

Table 2 shows correlation between the JMBI scores and the background of the respondents.

DISCUSSION

The rate of return for questionnaires is considered to be good if it is 60%, and excellent if it is over 70%. This study achieved a return rate of 67.1%, so it was considered to be well within the acceptable range.

There was a positive correlation between respondents’ age and Factor 4, between years at present employment and Factors 2 and 4, and between time spent on client care per day and Factor 4, respectively. Correlation between the average number of clients per day and the JMBI scores was not statistically significant. The difference in the JMBI scores according to the respondents’ gender show that the male respondents obtained significantly higher scores than the females for Factors 2 and 4 (p<0.01).
Some factors leading to burnout emerged: i.e., exhausting work environments in which negative interpersonal relationships give rise to communication problems and work-associated withdrawal behaviours; mental stress arising from loss of positive feedback from clients; and lack of clinical experience/knowledge/technique, together with vulnerability of individual attributes affecting these factors. The major constructs of burnout subscales in the original MBI are EE, DP and PA.

Among the many studies on the factor structure of the MBI that have been carried out, Donohoe et al. identified factors such as lack of communication with colleagues, diminished personal accomplishment and time constraints as being the three main factors contributing to burnout. As for the four factors identified in the present study, Factor 1 consisted of items in the DP subscale and items 6, 16, 13, 20, and 8 in the EE subscale; Factor 2 consisted of items 19, 12, 18, 9, and 21 in the PA subscale; Factor 3 consisted of such items as 1, 2, 3, and so on.

Table 1. Factor loadings after varimax rotation for the JMBI

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) Working with people all day is really a strain for me (EE).</td>
<td>0.79</td>
<td>-0.25</td>
<td>0.18</td>
<td>0.15</td>
</tr>
<tr>
<td>(10) I’ve become more callous toward people since I took this job (DP).</td>
<td>0.79</td>
<td>0.23</td>
<td>0.27</td>
<td>-0.01</td>
</tr>
<tr>
<td>(16) Working with people directly puts too much stress on me (EE).</td>
<td>0.78</td>
<td>-0.09</td>
<td>0.08</td>
<td>0.25</td>
</tr>
<tr>
<td>(11) I worry that this job is hardening me emotionally (DP).</td>
<td>0.76</td>
<td>0.30</td>
<td>0.27</td>
<td>0.07</td>
</tr>
<tr>
<td>(5) I feel I treat some recipients as if they were impersonal ‘objects’ (DP).</td>
<td>0.68</td>
<td>-0.12</td>
<td>0.10</td>
<td>0.23</td>
</tr>
<tr>
<td>(13) I feel frustrated by my job (EE).</td>
<td>0.68</td>
<td>0.24</td>
<td>0.17</td>
<td>0.06</td>
</tr>
<tr>
<td>(15) I don’t really care what happens to some recipients (DP).</td>
<td>0.66</td>
<td>0.26</td>
<td>-0.19</td>
<td>0.17</td>
</tr>
<tr>
<td>(20) I feel like I’m at the end of my rope (EE).</td>
<td>0.60</td>
<td>0.24</td>
<td>0.35</td>
<td>-0.09</td>
</tr>
<tr>
<td>(22) I feel recipients blame me for some of their problems (DP).</td>
<td>0.59</td>
<td>0.33</td>
<td>0.23</td>
<td>0.10</td>
</tr>
<tr>
<td>(8) I feel burned out from my work (EE).</td>
<td>0.59</td>
<td>0.33</td>
<td>0.45</td>
<td>0.02</td>
</tr>
<tr>
<td>(19) I have accomplished many worthwhile things in this job (PA)</td>
<td>0.16</td>
<td>0.72</td>
<td>0.07</td>
<td>0.26</td>
</tr>
<tr>
<td>(12) I feel very energetic (PA).</td>
<td>0.14</td>
<td>0.71</td>
<td>-0.26</td>
<td>-0.04</td>
</tr>
<tr>
<td>(18) I feel exhilarated after working closely with my recipients (PA).</td>
<td>0.11</td>
<td>0.59</td>
<td>0.09</td>
<td>0.42</td>
</tr>
<tr>
<td>(9) I feel I’m positively influencing other people’s lives through my work (PA).</td>
<td>0.24</td>
<td>0.57</td>
<td>0.19</td>
<td>0.35</td>
</tr>
<tr>
<td>(21) In my work, I deal with emotional problems very calmly (PA).</td>
<td>0.13</td>
<td>0.54</td>
<td>0.06</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Table 2. Correlation coefficients for the JMBI scores and background of the respondents

<table>
<thead>
<tr>
<th>Background of the respondents</th>
<th>EE/DP</th>
<th>PA</th>
<th>PE</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.01</td>
<td>0.09</td>
<td>-0.06</td>
<td>0.17*</td>
</tr>
<tr>
<td>Number of years as a physiotherapist</td>
<td>0.03</td>
<td>0.08</td>
<td>-0.12</td>
<td>0.17*</td>
</tr>
<tr>
<td>Number of years in present employment</td>
<td>0.05</td>
<td>0.20*</td>
<td>-0.04</td>
<td>0.21**</td>
</tr>
<tr>
<td>Number of clients per day</td>
<td>0.08</td>
<td>-0.12</td>
<td>0.08</td>
<td>0.07</td>
</tr>
<tr>
<td>Time spent on work with clients</td>
<td>0.01</td>
<td>0.02</td>
<td>0.11</td>
<td>0.21*</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01. Abbreviations: EE/DP; emotional exhaustion/depersonalisation, PA; personal accomplishment, PE; physical exhaustion, E; empathy.
and 14 in the PE subscale, indicating a negative physical manifestation, which is in agreement with Higashiguchi et al. 2); and Factor 4 consisted of items 4, 7, and 17 in the E or empathy subscale, indicating a positive attitude towards clients. Higashiguchi et al. stated that Factors 1, 2, and 3 in the original MBI are interrelated, and supported the notion that the relationship between the EE and DP scales is considerably high 2). However, because factors for the PE subscale have been identified in Japan but not in English-speaking countries, it is suggested that differences may exist in the factor structure of the MBI between these countries. The results of the present study are, thus, in agreement with this view.

The membership of the Japanese Physical Therapy Association in the year 1996 was 14,942 and has been steadily on the increase. However, the average number of physiotherapists per 100 beds in October 1996 in Japan was only 0.7 22), and this small number may indicate a shortage of staff, raising the possibility of burnout amongst physiotherapists through increased work-related tasks with a high possibility of physical exhaustion.

Factors relating to the E subscale were identified in this study, which have not been reported elsewhere. The goal of medical rehabilitation is to restore the right of a client to live as near physically normal as possible as a human being, and the most important aspect lies in returning independence to the client; i.e., clients are considered as active voluntary participants and are required to assist in raising their own independence level, not just to respond with a passive attitude towards treatment initiated by physiotherapists 23). In a nationwide survey conducted in 1991 in Japan 24), improvement in both the client’s motivation and activities of daily living were the reasons why 57% of physiotherapists chose functionally meaningful movement for their clients with hemiplegia as a treatment technique. This indicates that physiotherapists are endeavouring to carry out purposeful treatment, while, at the same time, taking into account changes in their client’s emotional aspects and simultaneously raising their own motivation to accomplish the desired effect. Therefore, whether or not the physiotherapist feels capable of empathizing with the client would influence their vulnerability to burnout.

According to the relationship between burnout among health care professionals and their age and number of years of clinical experience 3), the majority of physiotherapists at Massachusetts rehabilitation hospitals in the United States demonstrated moderate burnout, despite the fact that they had only had 3 years or less of clinical experience. As for the cause of this early burnout, the authors of that study 3) cautioned that the extreme idealism and excessive eagerness to demonstrate professional capability and achievement which is manifested by novice physiotherapists may have contributed to it. The results of a survey conducted on nurses demonstrated a significant negative correlation between age and physical exhaustion 2). Another survey conducted in the field of psychiatric nursing confirmed significantly higher emotional exhaustion in nurses who were in their late twenties than those whose age ranged from 40 to 60 years 6). In addition, personal achievement was found to be lower for health care workers in their thirties than for those in their forties to sixties and also for those with only one to four years of clinical experience compared with those with 20 to 40 years of clinical experience 6). This can possibly be attributed to the fact that, in psychiatric nursing, the course of mental illness can be considerably long with the immediate feedback of care not being apparent, so that the inexperienced nurse may lack a realistic attitude towards their clients’ long-term care. Similarly, for physiotherapists, some clients with certain conditions may not achieve the prognosis predicted following treatment, leading to possible burnout in the therapist with an unrealistic expectation of treatment or high expectations of improvement from a chronic client’s deteriorating condition. Therefore, in spite of the description extending over a long time as in the definition of burnout, this survey demonstrated that inexperienced physiotherapists showed a higher degree of burnout. However, only the empathy factor was statistically significant in comparison of correlations between the JMBI scores and age and number of years as a physiotherapist. Thus, Factors 1, 2, and 3 reflect a different dimension of burnout than Factor 4. Further, it is reasonable to conclude that increasing age and clinical experience make it easier to calculate a change in the client’s emotion.

Interestingly, the findings demonstrate higher scores for personal accomplishment and empathy factors amongst male rather than for the female respondents. Usually, women are considered to
empathize more easily than men, so this is an unexpected result. However, further study is needed to discuss this difference, since no study has yet explored the relationship between the degree of burnout and gender.

It is difficult to establish a set method of intervention for the burnout syndrome, because its causes differ according to individuals and environmental factors. Emotional stress resulting from displeasure and anger has been found to predispose or to trigger burnout, and recognition and consequent control of these emotions can be a means by which to avoid it. The annoyance factor Being pressed and coping with many people all day is really a strain for me gives rise to burnout, but being with people can also be a motivational factor which can have the opposite effect and raise morale. Complete removal of such burnout factors en masse cannot be justified, for health care professionals’ experience of personal satisfaction is through work with their clients. Further, as a coping strategy, being able to manage to continue one’s work with less required effort and so pace one’s physical and mental capabilities rather than to give out 100% of one’s energy, which leads to exhaustion in a very short time, would be a more satisfactory solution.

In this study the empathy factor newly emerged and showed a positive correlation with the number of years of clinical experience, as well as certain factors in other studies which also showed a positive correlation with the number of years of clinical experience. From the above facts, we can see that acquiring clinical experience and consequent improvement in one’s competency can alleviate burnout. Counselling, as well as stress management strategies, can be a few strong supports for people who are already experiencing burnout. Some respondents stated in their questionnaire the necessity for developing an efficient system of departmental management, including time for record keeping, but allowing sufficient time to work with clients.

CONCLUSION

Although most people experience various symptoms of burnout from time to time, an individual who is experiencing full-blown burnout exhibits them with increasing frequency and severity. Victims of burnout tend to accentuate the negative rather than the positive aspects of their work. This study demonstrated a moderate amount of burnout for physiotherapists practising in Ishikawa Prefecture. Burnout seems to be caused by emotional fatigue brought about by negative interpersonal exchanges and physical exhaustion due to staff shortage. Years of clinical experience, clinical competency and ability to empathize with clients can aid to lessen the possibility of burnout. In addition, counselling and/or stress management strategies within the hospital system would be valuable treatment tools in coping with impending burnout of staff members experiencing its signs and symptoms.

REFERENCES

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