Burnout and job engagement in dentistry

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CHAPTER 9

Summary and general discussion

As described in the introduction, this thesis was organized around three aims. In the present chapter these aims—the occurrence and development of burnout, possible preventive possibilities, and conceptually new ways to improve working conditions among Dutch dentists—are reviewed and integrated. First, the findings presented in the previous chapters are summarized. These findings are subsequently reflected on in a theoretical and practical sense, also leading to some recommendations for future research.

Summary of findings

The main focus of chapter 2 was to further strengthen the applicability of the Maslach Burnout Inventory (MBI) among dentists. To this end, the factor structure of the Dutch version of the MBI was examined in two independent, representative samples of Dutch dentists. Findings were subsequently compared to those found among other entrepreneurs within health care (i.e., general practitioners and physiotherapists). The results indicated that the three factor structure of the MBI (i.e., emotional exhaustion, depersonalisation and personal accomplishment) fits best within a sample of dentists-general practitioner. This strengthens the conclusion drawn by Gorter, Albrecht, Hoogstraten and Eijkman (1999a) that the MBI can be considered a suitable instrument for use among dentists.

An additional aim of chapter 2 was to examine the chronological development of the three burnout components. Knowledge of the chronological sequence in which these components emerge can provide important information for theoretical development and possibilities for intervention. Three proposed sequence models for the MBI-subscases were compared using Structural Equation Modelling (SEM).
Although no one model of sequence showed a particularly good fit, results from both samples indicated a preference for a sequence of emotional exhaustion → depersonalisation → personal accomplishment.

The study described in chapter 3 is an extension on the study on sequence described in chapter 2. To further examine the inferred causality between the three burnout components, a longitudinal design was used, in which a sample of dentists was examined in two waves, with a 3-year interval. Special precaution was taken to address the issue of wave nonresponse, which is an ubiquitous, but relatively sparsely addressed problem within longitudinal research. In line with the second aim of chapter 2, the fit of several chronological models proposed in earlier research was compared using SEM. Results indicate that the original model suggested by Maslach and Jackson (1981) (emotional exhaustion → depersonalisation → personal accomplishment) showed an adequate fit, thereby replicating the findings of chapter 2. However, an alternative model (personal accomplishment → emotional exhaustion → depersonalisation) also had a good fit. An exploratively constructed and empirically based ‘best fitting’ model indicated that emotional exhaustion could not be discarded as an early sign of burnout. Also, personal accomplishment varies in the position it takes in relation to emotional exhaustion. Taken together, results from chapters 2 and 3 indicate that the theoretically proposed three-factor structure of the MBI also is valid among dentists. Furthermore, results indicate that heightened levels of emotional exhaustion are an important early sign of burnout, while low levels of personal accomplishment can also be taken as a signal of warning.

Subsequently, in chapters 4, 5 and 6, more attention is given to aspects of prevention and intervention. A ‘generic’ aspect that is sometimes used to explain differences in levels of burnout is gender. Differences between the sexes in the manifestation of burnout have been reported for different occupational groups. Although some gender-specific explanations for this finding have been forwarded, there is a paucity of studies in which the relation with other work-related gender differences is examined. The objective of chapter 4 was to analyse gender differences in burnout among dentists and to identify possible concomitant factors. In line with earlier findings, male dentists reported higher levels of depersonalisation than female
dentists. No gender differences were found on emotional exhaustion and personal accomplishment. Moreover, no gender-related differences were found in experienced work-stress or health-related aspects. It was found, however, that male dentists put in more working hours and see more patients per week when compared to female dentists. In addition, a difference in mean age between male and female dentists was found. The main finding of chapter 3 was that the difference in depersonalisation disappeared when controlling for working hours and age. Thus, although gender differences in burnout among dentists do exist, underlying factors, such as working hours, have a profound influence on these differences. These results have direct practical consequences, for instance in distinguishing between groups concerning the way burnout scores are interpreted.

In a study by Gorter, Eijkman and Hoogstraten (2001), positive effects of a career counselling intervention program were found. In chapter 5, a one-year follow-up study on the effectiveness of the intervention program is described. Initially, a ‘burnout risk group’ was identified, that received personal feedback on their burnout scores and was invited to participate in the intervention program. The participants were approached again one year later. While demonstrating an improvement on all burnout subscales directly following the program, results show that the program participants showed a relapse one year later. However, a control group that indicated to have taken preventive action on its own initiative reported a beneficial effect in the long run. Controls that did not take any preventive action showed little or no progress.

Given the effectiveness of personal feedback, demonstrated in chapter 5, efforts were made to develop a convenient instrument to provide such feedback to the dentist-general practitioner. The Stress Thermometer is an easily accessible Internet-based instrument for feedback on work stress and burnout. In chapter 6 the development of this instrument was described, and its applicability among dental practitioners was determined. During an evaluation period of five months at least 12% of all possible respondents made use of the Stress Thermometer. Descriptive characteristics of the response group, as well as levels of burnout and work stress, corresponded with those found in the Dutch dentist population although some deviations were also present. These results indicate the applicability of the Stress Thermometer to a representative
variety of dentists. Although the deviations found should not be ignored in future use, the Stress Thermometer was successful in reaching a population that is difficult to reach. It effectively calls attention to sensitive personal issues concerning work-related stress and burnout, which are not easily discussed otherwise.

Chapters 7 and 8 explore additional ways to improve the working experience of dentists. In chapter 7 the combination of burnout and engagement among dentists is investigated. It was found that the hypothesized three-factor structure of engagement (vigor, dedication and absorption) as measured by the Utrecht Work Engagement Scale (UWES) could be confirmed among dentists. Furthermore, engagement related negatively to burnout. However, analysis using SEM revealed that a model consisting of a reduced (‘core’) burnout factor (emotional exhaustion and depersonalisation) and an enhanced engagement factor (consisting of the three UWES factors: vitality, dedication and absorption plus the burnout-subscale personal accomplishment) showed the best fit. Although these findings were somewhat contradictory with theoretical presumptions, the results were similar to those found in earlier studies. Overall, the outcomes of this study indicate the applicability of an engagement questionnaire to measure job engagement among dentists.

The aim of chapter 8 was to develop an instrument measuring actual job resources among dentists, and to assess the relative importance of these resources. Additionally, job resources were related to job satisfaction. Factor analysis (PCA) on the Dentists’ Experienced Job Resources Scale (DEJRS) resulted in eight factors, representing distinguishable categories of job resources. In rank order these were: Immediate Results / Ethics; (Long term) Patient Results; Patient Care; Craftsmanship; Idealism / Pride; Entrepreneurship; Material Benefits; and Professional Contacts. All subscales showed a positive correlation with job satisfaction. It was concluded that the DEJRS is a valuable and psychometrically sound instrument to monitor job resources as experienced by dentists-general practitioner. It is assumed that the stimulation of greater awareness of job resources serves a major contribution in burnout prevention.
General discussion

1. ON BURNOUT AMONG DUTCH DENTISTS: LEVELS AND SIGNIFICANCE

In table 1 the MBI scores found among Dutch dentists are shown as found in 1997, 2000, and 2001. Each MBI subscale score relates to the frequency dentists experience certain feelings; a score of ‘0’ means ‘never’, while ‘6’ should be interpreted as ‘every day’. The results in table 1 can be interpreted accordingly: (1) Dentists are ‘now and then (once a month)’ emotionally exhausted (score range 1.7 – 1.8); (2) ‘sporadically (a few times a year)’ they have feelings of depersonalisation (score range 1.2 – 1.3 for men, 1.0 – 1.1 for women); (3) Dutch dentists ‘(very) often (at least once a week)’ feel competent (score range 4.3 – 4.4). Furthermore, no evident trends emerge from the results in table 1, either positive or negative. These relatively favourable results could easily lead to the conclusion that continued attention for burnout prevention among dentists is unjustified.

<table>
<thead>
<tr>
<th></th>
<th>2001a</th>
<th>SD</th>
<th>2000b</th>
<th>SD</th>
<th>1997bb</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional exhaustion</td>
<td>1.8</td>
<td>1.1</td>
<td>1.3</td>
<td>1.1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Depersonalisation (men)</td>
<td>1.3</td>
<td>0.8</td>
<td>1.0</td>
<td>1.0</td>
<td>1.2</td>
<td>1.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Depersonalisation (women)</td>
<td>1.0</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>1.1</td>
<td>0.7</td>
<td>----</td>
</tr>
<tr>
<td>Personal accomplishment</td>
<td>4.4</td>
<td>0.9</td>
<td>4.3</td>
<td>0.8</td>
<td>4.4</td>
<td>0.8</td>
<td>----</td>
</tr>
</tbody>
</table>

*This thesis. **Based on Chapter 5, Table 1.

However, there are a number of reasons to declare such a conclusion inappropriate. For one, it is expected that high levels of burnout can lead dentists to prematurely stop active practice. As a result, the results in table 1 are likely to be positively biased because they are established among dentists that are actively at work in practice. Second, as was also noted by Gorter et al. (1999c), levels of emotional exhaustion are very high among those in the higher regions of the burnout scale. Moreover, about 3% of all working dentists score extremely unfavourable on all MBI scales. Third, using the norm scores described in the UBOS manual to reanalyse the results reported by Gorter et al. (1999c), it was found that in 1997, 11.3% of the response group could be categorized as being at high risk for burnout. Using the same norms for the studies described in this thesis, in 2000 and 2001, these percentages were 14.1% and 15.8%,
respectively. Thus, the percentage of dentists that is ‘at risk’ for burnout seems to be steadily increasing. These arguments warrant continued research on and attention for burnout and work related stress among dentists.

2. ON DISTINGUISHING BURNOUT FROM BURNOUT

When trying to make practical inferences on burnout research one is confronted with the distinction between burnout as a psychological, scientifically operationalized construct, and its existence as a clinical diagnosis. The fact that there is a non-equivalence between scientific and clinical approaches to health related issues is hardly surprising (and, concerning burnout, has been considered in some detail by Schaufeli & Enzmann, 1998). A clinical definition assumes a dichotomous situation – one either does or does not have burnout – while the MBI uses a (7-point Likert type) continuous scale. Although some evidence exists that it is feasible to combine the three MBI-subscale scores to form dichotomous conclusion (Brenninkmeijer, 2002), on an individual level the question remains: on a scale from 0 to 6, where does burnout begin? As people differ in the ways that they are able to ‘cope’ with stressors in the working conditions, conceptually, they will also differ in the level of stress that leads to burnout.

It could be argued that burnout is ‘revealed’ when symptoms – avoidance behaviour, relational problems, or health complaints – occur in such severity that normal functioning is no longer possible. Unfortunately, the actual symptoms ‘revealed’ are probably also highly different between individuals, as is also indicated by the following example. ‘Vinger aan de pols’ is a popular Dutch television programme that on a weekly basis reflects on various health-related issues. In an episode about burnout18, three well-known Dutch celebrities discussed their often very personal problems. All attributed their problems to a burnout, and all agreed that an overflowing work schedule and extreme work dedication lay at the root of their problems. However, it was interesting to note how very different the actual symptoms described were. These ranged from sexual dysfunction to not being able to actually

18 AVRO’s Vinger aan de pols, aired June 24, 2003.
perform tasks pertaining to work. If these people were all correctly diagnosed as ‘burned out’, while the actual symptoms reported are of such diversity, is it even possible to talk about one, single burnout?

It is not surprising to find that people diagnosed as being ‘burned out’ display a varying set of symptoms. What is more, in their examination of a wide diversity of studies on burnout, Schaufeli and Enzmann (1998) enumerated no less than 132 possible symptoms! To extend this issue to the dental situation, some additional analyses were performed. Interviews were analysed of thirty dentists that suffered from burnout, or who had burnout related complaints\(^9\). In the analysis, attention was given to the actual physical symptoms named by the interviewees. In line with the above, it was expected that actual reported symptoms would vary to a large degree. Surprisingly, however, an opposite picture emerged. All interviewed dentists mentioned some unwillingness to go to work, or reluctance in the prospect of having to continue practicing for another couple of decades. Furthermore, a variety of general stress complaints, exhaustion, headaches, and some psychological problems were mentioned. These symptoms, of course, are typical for the emotional exhaustion component of burnout, which can be seen as an orthodox stress variable. However, the majority of these dentists (>50%) mentioned physical problems particularly related to ergonomics (lower back pain, neck pain). These findings coincide with the results of a large field study that was specifically aimed at improving the ergonomic aspects of dental work\(^20\). In this study, it was found that many of these dentists also reported a large number of psychological problems (often summarized as ‘burnout-related complaints’). Thus, it seems that in dentistry, the most frequent physical symptoms relating to work stress and burnout specifically lie in the sphere of ergonomics.

In standardizing the burnout measurement, the MBI in fact presupposes identical symptoms in different people. However, it is generally agreed upon that, at an individual level, an MBI score has only limited significance; it is impossible to express the diversity of burnout related problems in a score on emotional exhaustion,

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\(^9\) For a further description of these interviews, see Gorter (2000, p. 172).

depersonalisation and personal accomplishment. Only when incorporated with a number of other aspects (physical tests, opinions of family, colleagues, friends, etc.) a personal indication can be obtained. In this context, the relative consistency of reported symptoms in the dental population is of interest. When among dentists, complaints reveal themselves predominantly at an ergonomic level (which is commonsensical in this occupation), perhaps such generalizations can also be made within other professions. Burnout results on the occupational level are measured on group level, thus validating the use the MBI. At the same time, these results can be of direct importance to individuals within the occupational population, which is underlined (in case of dentistry) by a practical application such as the Stress Thermometer (see chapter 6). This calls for the development of tailor made instruments, like the Stress Thermometer, for different occupations.

3. ON DISTINGUISHING BURNOUT FROM RELATED TERMS

The extend to which burnout can be distinguished from other, intuitively comparable phenomena like work stress, depression, anxiety, and chronic fatigue has often been discussed (e.g., Bakker, Schaufeli, Demerouti, Janssen, Van der Hulst & Brouwer, 2000a; Glass & McKnight, 1996; McKnight & Glass, 1995; Schaufeli & Enzmann, 1998). Burnout does not readily relate to any of the criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, American Psychiatric Association, 1994). Although the International Classification of Diseases (ICD-10, World Health Organization, 1992) defines a work related neurasthenia, its criteria only to a certain degree overlap with the complete, three-fold definition of burnout.

One argument to justify the distinctive position of burnout is that it occurs within a very specific context; it is by definition job related. Depression on the other hand, is more persuasive and ‘context-free’\(^{21}\). In their study among teachers, Bakker et al. (2000a) found that burnout can be an antecedent of depression. According to these authors this is indicative of depression as a more generalized phenomenon in comparison to burnout. There is also empirical evidence that burnout can be

\(^{21}\) To illustrate, burnout has been dubbed ‘professional depression’ by Oswin (1978, in: Schaufeli and Enzmann, 1998).
distinguished from depression. Confirmative factor analysis can discriminate between depressive components (as measured using the CES-D) and the three MBI components. The reported variance shared between emotional exhaustion and depression varies between 20% (Glass & McKnight, 1996) and 31% (Bakker et al., 2000a), whereas the correlation between depression and depersonalisation and personal accomplishment is much lower. Another reason used to differentiate burnout from related terms is the fact that its definition includes depersonalisation and personal accomplishment. Whereas exhaustion is an orthodox reaction to adverse circumstances, the inclusion of the other two components implies that burnout differs from depression, fatigue or stress (Cordes & Dougherty, 1993; Schaufeli & Van Dierendonck, 1993).

Interestingly, recent developments somewhat undermine these arguments. In the last decades, the scope of applicability of the MBI has widened to various occupations, thereby going beyond its former ‘target’ population of human services professions. As this development continues, the ‘context argument’ will increasingly lose meaning. To illustrate, versions for university students have recently been developed (Schaufeli & Bakker, 2003b; Schaufeli et al., 2002a, see also below). Although among students stress, exhaustion, depression, and perhaps even burnout undoubtedly occur, it will become somewhat awkward to differentiate ‘burnout’ within such a population. In addition, findings in this thesis weaken the conceptual importance of personal accomplishment. Among dentists it was found that personal accomplishment develops relatively independently from emotional exhaustion and depersonalisation (see Gorter, 2000, and chapters 2, 3, and 7), while the latter are often regarded as the ‘core’ of burnout. Thus, in deviating from the original context and definition proposed by Maslach and Jackson (Maslach & Jackson, 1981), some of the more distinguishable attributes of the definition of burnout are lost.

With the introduction of job engagement a related question arises: are burnout and engagement conceptual opposites, or should they be considered in their own right? As was concluded in chapter 7, the constructs burnout and engagement can be defined as each other’s opposites, but this does not necessarily mean they are also mutually exclusive. Some level of engagement can exist while at the same time certain
aspects of a pending burnout may be surfacing. This is inherent in the way burnout is measured (i.e., the MBI uses measures of frequency). Thus, on a conceptual level, it seems warranted to see the two concepts as separate, but negatively related constructs. However, in examining the two constructs, the position of the personal accomplishment component has come under further scrutiny. It appeared that this subscale, traditionally linked to the burnout construct, better ‘fitted’ with engagement. A possible explanation for this effect (outlined in chapter 7) was the deviating way the personal accomplishment scale is phrased in comparison to both other scales.

To explore this issue further, a study among psychology students was employed. A total of 292 subjects were divided in two groups. Group 1 completed a version of the MBI in which the three subscales were phrased as in the original version (i.e., negatively phrased items on the emotional exhaustion and depersonalisation scales, positively phrased items on the personal accomplishment scale). Group 2 filled in an adapted version of the MBI, in which all items, including those pertaining to personal accomplishment, were phrased negatively. Results indicated that the interscale correlations between the subscales were substantially higher in group 2 than in group 1. This signifies the effect of the (positive or negative) direction of item phrasing; same-direction item phrasing leads to higher correlations than opposite-direction item phrasing.

As an extension of this study, another study among students was performed. An identical methodology was used as in the Bouman et al. (2002) study, but this time a version of the UWES was included in the questionnaire. Table 2 shows the resulting interscale correlations. Within the MBI subscales, the correlations were much higher in group 2, thereby again demonstrating the pronounced effect of the rephrasing of the personal accomplishment subscale. The correlations of the originally phrased personal accomplishment scale were positive and moderately high with all UWES scales, and higher than the correlation with both other MBI scales (which is in line with the results found among dentists, see chapter 7). The correlations of the UWES with the

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22 This study was published as Bouman, AM, Te Brake, JHM and Hoogstraten, J (2002). Significant effects due to rephrasing the Maslach Burnout Inventory's personal accomplishment items. *Psychological Reports, 91*, 825-826.
rephrased personal accomplishment scale did not deviate much in comparison to group 1; obviously, the correlations are inverted, but their absolute values are only slightly reduced. However, in group 2 the correlation of personal accomplishment with depersonalisation is much higher than its relation with any of the UWES scales. This indicates that the phrasing of the personal accomplishment scale is indeed an important factor in determining whether it ‘belongs’ to burnout or to engagement. Therefore, the issue of item phrasing should be explored further in future research, and the relative position of the personal accomplishment scale within the MBI, but also in relation to engagement, should be interpreted with care.

**TABLE 2. INTERSCALE CORRELATIONS FOR THREE SUBSCALES OF THE UBOS AND THE THREE SUBSCALES OF THE UBES, ADAPTED FOR STUDENTS, FOR TWO CONDITIONS**

<table>
<thead>
<tr>
<th></th>
<th>Group 1 (N=119)</th>
<th>Group 2 (N=123)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>PA+</td>
</tr>
<tr>
<td>Emotional exhaustion</td>
<td>0.28*</td>
<td>-0.01</td>
</tr>
<tr>
<td>Depersonalisation</td>
<td>-0.37*</td>
<td>-0.53*</td>
</tr>
<tr>
<td>Personal accomplishment+</td>
<td>0.63*</td>
<td>0.54*</td>
</tr>
<tr>
<td>Vitality</td>
<td>0.68*</td>
<td>0.75*</td>
</tr>
<tr>
<td>Dedication</td>
<td>0.67*</td>
<td></td>
</tr>
</tbody>
</table>

|                      | D               | PA-             | VI      | DED    | AB   |
| Emotional exhaustion | 0.30*           | 0.36*           | -0.15   | -0.02  | 0.00 |
| Depersonalisation    | 0.62*           | -0.40*          | -0.66*  | -0.37* |
| Personal accomplishment- | -0.51*      | -0.45*          | 0.43*   |
| Vitality             | 0.67*           | 0.81*           |         |
| Dedication           | 0.70*           |                 |         |

Note: D=depersonalisation; PA+ =personal accomplishment, positively phrased items; PA- =personal accomplishment, negatively phrased items; VI=vitality; DED=dedication; AB=absorption. *p<0.01

4. ON BURNOUT PREVENTION AND INTERVENTION

Several issues concerning the practical prevention of burnout among dentists are described in chapters 4, 5, and 6. The study described in chapter 4 has shown that although a distinction on the basis of gender does indicate differences in levels of burnout, these differences (specifically: women, less than men, develop a cynical and distant attitude to their patients) appear to be related to differences in their actual working situation (number of working hours and treated patients). In line with the structuralist approach, as discussed by Cleveland (2000), these results indicate that the gender differences found are a reflection of different working conditions. This, in turn, implies that it would be unwise to use gender as a criterion to differentiate between burnout risk groups.
In view of prevention and intervention, the results found in chapter 5 are of particular interest. In chapter 5 several explanations are given for the lack of favourable long-term effects in burnout levels of a career-counselling program for dentists. More revealing, however, were the positive results found among the control group that indicated to have taken preventive steps on their own account. These dentists probably found specific aspects to alleviate their situation, most of which concerned specific changes made in the direct working environment. In light of these results, and considering that the trigger to take action apparently lies in the availability of specific feedback, the development of the Stress Thermometer was an obvious and practical further extension. In addition to its description and discussion in chapter 6, three general annotations can be made considering this Internet based self-assessment instrument.

In a practical sense, what is the value of the Stress Thermometer as a diagnostic instrument? In the situation described in chapter 6, feedback is given in comparison to norms within the occupational group, thus making a relative comparison. A more absolute indication of the level of burnout can be attained by comparing the respondent’s score to the norms that are available (e.g., Schaufeli & Van Dierendonck, 2000). However, the Stress Thermometer was not designed to provide such absolute conclusions, as is also discussed in the following paragraph. The responsibility of coming to the ‘correct’ conclusion remains the dentist’s, and the information from the Stress Thermometer is only one of the aspects that can help dentists develop this conclusion. The acceptance of behavioural change, and the instigation of necessary adjustments to make a change possible, are alleviated by the congruence of self-evaluation on the one hand, and external judgments on the other (McDonald & Boud, 2003). Ideally, these external judgments (by family, friends, colleagues, assistants) should already in itself have ‘primed’ the dentist to some level of realization about a pending burnout. However, more often than not, external warnings provide inadequate incentive to make actual changes to prevent further downfall. This is particularly true in the situation of the dentist-general practitioner. Financial commitment and the
inability to change career perspective can lead to feelings of being ‘trapped’\textsuperscript{23}, thus preventing the dentist from even considering work-related changes. Also, in most cases there are relatively few colleagues that could help clarify a potentially hazardous situation. Furthermore, it has been suggested that most dentists may simply feel embarrassed by the thought of seeking professional help (Rada & Johnson-Leong, 2004). Instruments like the Stress Thermometer could add the, scientifically supported, factor of self-evaluation to the equation.

A related issue concerns the manner in which the burnout-feedback itself was derived. Combining the results on the three MBI subscales to one single outcome (i.e., respondent is / is not at risk) is not without controversy (Brenninkmeijer & Van Yperen, 1999, also discussed in the previous section). However, although a combination of scores is necessary for an overall judgment, the separate results on emotional exhaustion, depersonalisation and personal accomplishment were also made available to the respondent. Also, research suggests that the criterion used (i.e., high levels of emotional exhaustion and depersonalisation and/or low levels on personal accomplishment) is indeed an effective categorization in mapping differences between individuals high and low in burnout (Brenninkmeijer, 2002). Finally, in the Stress Thermometer, no direct conclusions were drawn from the MBI scores. Even if the respondent was categorized as ‘high risk’, it was emphasized that this conclusion is the resultant of a “random indication, which could be highly influenced by temporary factors” (see chapter 6, box 1). Hence, although the problems concerned with a combination score are recognised, it is reasonable to assume that the use of a combination score in the Stress Thermometer is warranted.

A final remark about the Stress Thermometer concerns an ethical issue on the direct feedback dentists received. Freud himself did not consider it wise to provide patients with an uninvited analysis. He saw an essential distinction between someone who actively searches for help, and help that is unsolicited forced upon someone. The patient, when not psychotic or suicidal, should himself make a first effort, thereby performing an important aspect of the overall therapy. (Moreover, to be fully certain

\textsuperscript{23} Described by Gorter (2000) as ‘the golden cage’ (p.177).
of commitment to therapy, Freud proposed a financial contribution to be mandatory.) Of course, the dentists responding to the Stress Thermometer are well aware they are doing a test on work stress and burnout (which in itself is often considered an important first step for improvement). Nevertheless, a possible negative outcome can cause some concern, and care should be taken not to alarm the dentist, and then leave it at that. Therefore, in the current setup, an external link was given to direct the dentist to more specialized help (see chapter 6). It was found, however, that during the evaluation period very few dentists actually made use of this possibility. It is not clear what the cause of this result is. Perhaps there is too great a leap from the relatively anonymous surroundings of the Stress Thermometer to the actual process of contacting professional help (which would be in line with findings by Rada & Johnson-Leong, 2004). To overcome this threshold, in future developments personalised help can possibly be incorporated in the Stress Thermometer itself. For instance, in the Netherlands an Internet-based therapy has been developed (www.interapy.com), which offers an easily accessible, interactive way for psychological help through the Internet (see, e.g., Lange, Van de Ven, Schrieken & Smit, 2004, for an example on the issue of burnout). A combination of the Stress Thermometer with such a digital provision seems an obvious possibility for future extension.

5. ON MEASURING POSITIVE ASPECTS

Over the last decade, social research among dentists has predominantly focussed on negative aspects in work. An important aspect of this thesis is its aim to introduce a more positive focus within dental research tradition. As outlined in chapters 7 and 8, this is in part a consequence of a more general trend within psychology to change attention from the predominance of the negative to a more positive outlook. In this section, some issues concerning these new concepts will be further examined.

Can the study of positive aspects within the dental setting provide a valuable addition to research on prevention and intervention of burnout? Given the results from a recent study on the interaction of job demands, job resources, burnout and job engagement, it would appear not. In their study, Schaufeli and Bakker (2004, p.311)
conclude that “…from a preventive point of view, decreasing job demands is to be preferred above increasing job resources.” Although it was found that these aspects did have a positive effect on levels of engagement, their rather small influence on turnover intention led the authors to the conclusion quoted above. However, given the very different nature of their study, it remains questionable whether a generalization of this conclusion is warranted. Most importantly, the use of an outcome measure like turnover intention is not particularly fitting within a dental setting. The average dentist experiences a high threshold for a career shift because of the financial and social status, and the obligations towards patients. The feeling that there is no perspective of a career outside dentistry, withholds most dentists from even considering leaving the profession (Gorter, 2000). It is therefore particularly important for the dentist not to lose sight of the pleasurable, positive aspects in dentistry.

Another aspect of the Schaufeli and Bakker (2004) study pertains to the operationalization of job resources. Job resources were equated to rather unspecific aspects (i.e., performance feedback, social support, and coaching). For the typical dental setting, these measures are relatively useless. For instance, dentists are professional entrepreneurs within health care, and in the Netherlands, approximately 70% of these dentist run a solistic practice. Social support and feedback are therefore no ideal way to operationalize job resources, as they are not easily transposed to the dental situation. For most working people, a ‘feedback network’ is present, consisting of colleagues, superintendents, and company doctors. Inasmuch as such a feedback network is available for the dentist, it will be much smaller, and no formal equivalent for a company doctor exists. Thus, the absence of clear feedback on the actual dental work, and the lack of social support and coaching are typical work demands within the dental setting.

It then follows that further specification is needed to determine the dentists’ job resources. This has resulted in the Dentists’ Experienced Job Resources Scale (DEJRS, described in detail in chapter 8). With the development of the DEJRS, an alternative, more concrete interpretation of the concept of job resources was

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24 Percentage of Dutch dentists that had complete solistic ownership of the dental practice in the spring of 2004. Results provided by the Dutch Dental Association (NMT).
developed. Simultaneously, the three general aspects used by Schaufeli and Bakker (2004) are comprised in the DEJRS, albeit in a dental specific manner. For instance, performance feedback is included in such items like “Satisfaction or gratitude shown by patients” (directly), “Gaining patients’ trust”, and “Seeing a good treatment result” (indirectly). In line with the reasoning presented earlier, it is hoped that by examining concrete, occupation-specific job demands and job resources, a more accurate portrayal of these demands and resources in dental practice can be attained.

6. ON FUTURE RESEARCH ON THE WORKING CONDITIONS OF DENTISTS

Longitudinal research, such as described in chapter 3, is necessary to gain further insight in possible causal factors for work stress and burnout. It is recommended to extend the longitudinal research to include engagement and positive aspects; much more insight can be gained about the interaction of engagement and burnout, while the long-term influence of positive working resources can be assessed. Methodologically, it is not unwarranted to pay more attention to the specific handling of missing values in such research. To just ignore the occurrence of missing values, which is often the case in longitudinal research, can lead to biased results. More sophisticated strategies, one of which is outlined in chapter 3, does not necessarily undo such bias; obviously, it is impossible to conjure absent data back into existence. However, besides being less vulnerable to biases, these elaborated strategies can help to give more insight into the effects of the missing data.

In the above, attention is given to burnout and engagement of dentists in relation to the well-being of that same dentist. Tentatively, at least two other outcome measures that result from either burned out, or engaged dentists can be considered: patient care and productivity. Patient care, or quality of the dental work, seems an obvious point of venture. It is not unimaginable that adverse working conditions can have a detrimental effect on patient dental care – while the presence of positive working aspects might increase quality of care. Future studies should take this issue into consideration. From an economical point of view, productivity might be another interesting aspect to consider. Seeing the ever-increasing shortage of dentists in the Netherlands, a higher productivity (i.e., more patients treated) per dentist would not be
unwelcome. The notion of the ‘happy – productive worker’ (i.e., a happy worker is a productive worker) has been subject of debate. Although results of studies on its causality are not unambiguous (Jex, 1998; Ledford, 1999), some evidence indicates that such a relation indeed exists (Cotton, Dollard & De Jonge, 2002; Wright & Staw, 1999a, 1999b). However, this evidence points to a trait-based disposition of happiness; employees in these studies are either happy or not and tend to stay that way. Translated to the situation of dentists, it is to be expected that engaged dentists are more productive than those who are not. Interestingly, the job resource factor that was found to be most important in explaining levels of engagement, was ‘Pride / Idealism’. This factor (see chapter 8) consists of items such as “Feeling of being of importance”, “Being proud of dentistry”, and “Being a good caregiver”. These aspects can also be seen as being intrinsically present, and therefore it is a relatively useless factor for trying to make the dentist happier (or more engaged). The only practical consequence associated with this finding is one that is politically incorrect, and lies in the arena of selection (as also pointed out by Ledford, 1999, p.27): “...[educational facilities] might select the happy candidates and avoid grumpy ones to improve the average level of productivity.” Of course, it remains doubtful whether such implementation is desirable.  

Conclusion

Inasmuch as “burnout threatens”, as Gorter (2000, p.177) concluded, this threat should not be ignored in case of the dental practitioner. This thesis has shown that high levels of emotional exhaustion can be indicative of a pending burnout, especially when combined with feelings of incapability. Nevertheless, this thesis also provides in handles to counter the threat of burnout. By providing clear and understandable individual feedback directly to the dentist, the awareness of the potential problematic state of affairs is increased, and preventive action (preferably on the dentist’s own initiative) is encouraged. The Stress Thermometer is an ideal instrument to provide

25 Even so, it is unwise to underestimate the possible positive effects on teacher burnout in dental schools!
such feedback. In addition, with all the attention given to the negative aspects of
dental work, the many benefits that are certainly present in providing dental care tend
to be overshadowed. Now, it would make sense to turn our attention to the more
positive aspects of dental work. In doing so, hopefully a balance can be found between
the prevention of the burned out dentist at the one hand, and the promotion of the
engaged dentist at the other. Perhaps this thesis can convince researchers and
policymakers to try and accomplish such a balance.