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Burnout development among dentists: a longitudinal study

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Knowledge on the development of burnout among dentists is important for purposes of prevention and intervention. Using a two-wave longitudinal design, this study examined the chronological sequence of the three dimensions of the Maslach Burnout Inventory: emotional exhaustion; depersonalization; and personal accomplishment. Structural Equation Modelling was employed among a representative sample of Dutch dentists to examine the fit of several models proposed in earlier research. The results indicated that a model in which emotional exhaustion precedes depersonalization, which in turn precedes personal accomplishment, shows an adequate fit among dentists. However, an alternative model, in which personal accomplishment precedes emotional exhaustion, had an even better fit. In addition to the test of these *a priori* models, an *ad hoc* model was constructed that best fitted the current data. This model indicated emotional exhaustion to precede the development of depersonalization and personal accomplishment independently. Although not univocal, the results showed that emotional exhaustion should not be discarded as an early sign of burnout. This is in line with the view that emotional exhaustion can be considered as the key dimension of burnout.

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One of the possible consequences of chronic occupational stress is professional burnout (1). Burnout is known to have dramatically negative consequences for quality of work, professional relationships, and personal wellbeing. The most widely accepted definition of burnout consists of three dimensions (2). The first, called emotional exhaustion, emphasizes becoming mentally or emotionally exhausted. The second, the development of a negative, cynical attitude towards one's clients or patients, is called depersonalization. The third dimension is the tendency to evaluate oneself negatively. Professionals feel unhappy about themselves and feel dissatisfied with their accomplishments. Emotional exhaustion is considered to be the key dimension, showing the most robust relationships with various job stressors, such as work overload, role problems, or lack of social support (3).

Burnout has been the topic of studies among dentists in various countries, including the UK (4), the Netherlands (5, 6), and Finland (7). From these studies, it was concluded that about 12% of the UK dentists were at risk of burnout. Of the Dutch dentists, 13–16% had high overall levels of burnout, whereas 3% were considered to be fully burned out while still working. Burnout thus can be considered a serious risk to the dental profession, being both a threat to the available work force and a personal tragedy for the individual dentist. Therefore, monitoring burnout risk, and subsequent prevention and intervention, deserves continuous attention.

Measurement of burnout in current scientific research is usually carried out using the Maslach Burnout Inventory (MBI) (8), often referred to as the 'gold standard' (9). The MBI measures the three dimensions of burnout mentioned above: emotional exhaustion, depersonalization, and (diminished) personal accomplishment. Although the MBI has generally been accepted as a perfectly acceptable instrument for using to measure burnout, empirical knowledge on the sequence in which the three dimensions of burnout manifest themselves is sparse. Such knowledge is important, as early recognition is essential for possible intervention in, and prevention of, burnout.

In the literature, several models of the sequence of the burnout dimensions are proposed. Most prominently, Maslach & Jackson (10) expected that emotional exhaustion precedes depersonalization because an exhausted professional (such as a dentist) no longer has the energy for being empathetic or to care for the patient. After symptoms of depersonalization arise (e.g. a more cynical and less interested attitude towards patients), the professional will begin to feel less effective on the job, thus resulting in diminished feelings of personal accomplishment. Support for this sequence (i.e. emotional exhaustion → depersonalization → personal accomplishment) was found by the authors themselves (10) and by others (11, 12).

An alternative model, the so-called progressive-phase model (13), proposes a sequence in which

depersonalization is the first dimension to become dominant in the burnout process, followed by feelings of diminishing personal accomplishment, and finally leading to the professional being emotionally exhausted (i.e. depersonalization → personal accomplishment → emotional exhaustion). Although some evidence was found for the progressive-phase model (14), the model was severely criticized on methodological grounds by LEITER (15). Other variations in the sequence of the burnout dimensions were also reported, based upon different occupations and research designs (12, 16). All models are summarized in Table 1.

The overall weakness of most studies concerned with the sequence of the burnout dimensions is that they are based upon cross-sectional designs. Although the methodological technique of structural equation modelling can be correctly used to investigate a chronological order of subscales, a longitudinal design is necessary to rule out the reverse causation possibility (11, 17). Moreover, a longitudinal design makes an empirically more viable point of chronology and causality. To our knowledge, so far no studies among dentists have been published in which a longitudinal design was used to evaluate the process of burnout.

The aim of the present study therefore was to examine the sequence of the three burnout dimensions, based upon longitudinal data, gathered from a representative group of Dutch general dental practitioners. Using structural equation modelling, several proposed models of sequence are compared. On the basis of previous studies, in which support was found in occupations as managers and professionals (11), physiotherapists (12), and teachers (18), the original model proposed by MASLACH & JACKSON (10) (emotional exhaustion precedes depersonalization, which then influences personal accomplishment) is expected to be the best fitting among dentists.

Material and methods

Participants and procedure

Participants in this study were derived from the pool of dental practitioners registered in the files of Movir Insurance (which at the time of the study included more than 77% of all active Dutch dentists). A random selection procedure was employed, using stratification for gender, region (all twelve Dutch provinces), and age. At wave 1, a questionnaire was sent to a total of 950 dentists. At wave 2, the same group of dentists was approached, excluding 65 dentists who had explicitly indicated that they no longer wished to participate. Data collection took place in March and in April 1997 (wave 1) and between April and June 2000 (wave 2). The procedure included an announcement, two reminders, and if necessary the questionnaire was completely resent, following the recommendations of DILLMAN (19).

Materials

A Dutch version of the MBI was used to measure burnout (20). Like the MBI-human services survey (MBI-HSS) (1), this instrument contains three subscales that correspond to the three dimensions of burnout: emotional exhaustion, depersonalization, and personal accomplishment. The emotional exhaustion subscale consists of eight items (e.g. 'I feel emotionally drained from my work'), depersonalization consists of five items (e.g. 'I don't really care what happens to some patients'), and personal accomplishment consists of seven items (e.g. 'I deal very effectively with the problems of my patients'). Each of the 20 items can be answered on a 7-point Likert scale, ranging from 0 ('never') to 6 ('every day'). The Dutch version of the MBI was renamed the 'Utrecht Burnout Scale', or UBOS (20). The UBOS has been validated among a wide variety of occupations (20), and its psychometric soundness and usability among dentists has repeatedly been established (6, 21, 22).

Statistical analysis

In longitudinal studies participants may be present in some waves of data collection and missing in others. This type of missing data may be called wave non-response (23). This potential problem in analysing the results was overcome by employing multiple imputation (MI) on our data. Application of MI requires three steps: imputation; statistical analysis; and pooling. First, using data augmentation, the (incomplete) item scores of the burnout scale from wave 1 and wave 2 were used to create five complete data sets (24, 25). All analyses (described in detail below) were performed separately on each of these data sets, thus creating five sets of results. In a final pooling step, these multiple outcomes were combined into a single set of results (26). Although the above brief outline does no justice to the complexity of the MI procedure, a more elaborate outline would go beyond the aims of this article. For a more thorough introduction to the MI procedure the reader is kindly referred elsewhere (23).

Psychometric aspects of the MBI subscales were examined by calculating interscale correlations and internal consistencies (Cronbach's alpha). To determine the sequence of the three burnout dimensions, thereby answering the main research question, several two-wave longitudinal models were compared, in terms of model fit, using the program LISREL 8.54 (27). Analyses consisted of three distinguishable steps. First, a stability model was tested in which the three dimensions were allowed to correlate with each other within each wave and in which the factors at wave 2 were regressed on themselves at wave 1. The purpose

Table 1

Theoretically proposed models of the chronological sequence of the three dimensions of burnout

MASLACH & JACKSON (10)	Emotional exhaustion → Depersonalization → Personal accomplishment
GOLEMBIEWSKY & MUNZENRIDER (13)	Depersonalization → Personal accomplishment → Emotional exhaustion
VAN DIERENDONCK *et al.* (16)	Personal accomplishment → Depersonalization → Emotional exhaustion
DE VRIES (12)	Personal accomplishment → Emotional exhaustion → Depersonalization

of the second step was to attain a data-driven, best-fitting model. To achieve this, a stepwise approach was followed, which started with a baseline model consisting of all possible longitudinal relations. In this baseline model, Wald tests were used to identify the longitudinal relations that do not significantly differ from zero. In successive steps, these non-significant regression weights were fixed to zero (thereby effectively removing the relation), until only significant regression weights remained. This procedure results in a parsimonious model that, purely on an empirical basis, can be considered best fitting to the data. In a third and final step, the fit of four models described in the literature was tested (see also Table 1): the model describing the sequence emotional exhaustion → depersonalization → personal accomplishment, proposed by MASLACH & JACKSON (10); the model suggesting the sequence depersonalization → personal accomplishment → emotional exhaustion, proposed by GOLEMBIEWSKI & MUNZENRIDER (13); the model containing the sequence personal accomplishment → depersonalization → emotional exhaustion, proposed by VAN DIERENDONCK *et al*. (16); and the model with the sequence personal accomplishment → emotional exhaustion → depersonalization, proposed by DE VRIES (12). Because identical items were administered twice, the residuals of the paired items are allowed to covary over time in all models.

The goodness-of-fit of models was assessed by several widely used absolute and relative indices. The absolute-fit indices were the chi-square goodness-of-fit index(χ^2) with the accompanying degrees of freedom and the root mean square error of approximation (RMSEA). A lower value of χ^2 indicates a better fit of the model. The value of the RMSEA should approach zero, whereby values smaller than 0.06 are considered indicative of acceptable model fit (28). The fit indices non-normed fit index (NNFI) and comparative fit index (CFI) were included to test the relative fit of models. Values for the NNFI and the CFI between 0.95 and 1.00 can be seen as indicative of a good fit, and values of 0.90 or higher are indicative of an acceptable fit (29). Furthermore, the fit of models was assessed by means of Akaike's information criterion (AIC) and the consistent Akaike's information criterion (CAIC) (30). The relative fit of models that differ in restrictiveness can be assessed using these indices, with lower values of AIC and CAIC indicating better fit. Although, because of the use of Likert scales, the data are not normally distributed, the use of maximum likelihood estimation is warranted in light of its robustness to such issues of non-normality (31).

In this study, we used a latent variable approach to study the development of the burnout dimensions. In addition, the study explicitly tested the often implicitly made assumption of measurement invariance. Measurement invariance is an essential aspect of longitudinal research (32). In the comparison of measurements in both waves, it is important to establish that the items measure the same construct at wave 1 and wave 2. Differences in item scores over time can thus be attributed to differences at the level of the constructs (i.e. the dimensions of burnout). Measurement invariance was investigated by testing for strong factorial invariance over time, which involves restricting measurement parameters to be equal over time. MEREDITH (33) has shown that if factor loadings and measurement intercepts are time-invariant, measurement invariance holds (32). Factor loadings of items are essentially the regression weights of the items on the factor, and measurement intercepts provide an indication of the 'difficulty' of an item.

Results

Of the 950 dentists who had received a questionnaire at wave 1, 689 responded (response rate 75%). At wave 2, 493 of the 885 questionnaires were returned (57%). Both of these samples could be considered to be representative for the general population of dental practitioners in the Netherlands. More details of these two studies are available elsewhere (21, 34). At both waves, a number of dentists had removed the identification number assigned to them by the researchers, thereby making it impossible to merge their data. This resulted in the exclusion of 30 respondents from the 1997 study (4.3%) and in the exclusion of 18 respondents from the 2000 study (3.7%). Burnout levels (mean emotional exhaustion, depersonalization, and personal accomplishment scores) within these excluded subgroups did not differ from the total means within studies, which makes it tenable to assume that removal of these respondents did not affect the current analyses. As with any two-wave longitudinal study, three types of respondents were distinguished: (i) those who respond at wave 1, but not at wave 2 ($n = 251$ dentists in this study); (ii) those who respond at wave 2, but not at wave 1 ($n = 67$ dentists in this study); and (iii) those who respond at both waves ($n = 408$ dentists in this study). Using MI, data from all 726 respondents was included in the analyses.

Table 2 shows the psychometric results for both measurement points for the imputed data set. The internal consistencies, as well as the interscale correlations, show the same pattern as reported in the UBOS manual (20), although the emotional exhaustion–depersonalization correlations in both wave 1 and wave 2 are relatively high (the manual norm for emotional exhaustion–depersonalization is 0.49).

Structural equation modelling

To address the main aim of this study, several models of sequence were compared using structural equation modelling. As explained above, initially an explorative, data-driven procedure was followed to find a best-fitting model. As advised by SCHAFER (25), to produce this model, one imputed data file was randomly selected for the iterative procedure. The resulting model was subsequently fitted on the four remaining imputed data sets. This iterative procedure resulted in a model in which emotional exhaustion directly precedes both depersonalization and personal accomplishment (i.e. high levels of emotional exhaustion lead independently to higher levels of depersonalization and personal accomplishment). The empirically based best-fitting model of the sequence of the burnout dimensions among dentists is shown in Fig. 1.

The goodness-of-fit indices for all models are presented in Table 3. Although the RMSEA is somewhat higher than the benchmark of 0.06, the NNFI and CFI indicate a sufficient fit for all models. The parameter estimates of the beta-weights (for the baseline model) are shown in Table 4. As can be seen by the results of the Wald tests, three paths are not significantly different

Table 2

Multiple imputation (MI) estimates of interscale correlations and internal consistencies (Cronbach's alpha – in italics) for the three Maslach Burnout Inventory (MBI) dimensions measured at wave 1 (1997) and wave 2 (2000) (n = 726)

MBI dimension	EE_1	D_1	PA_1	EE_2	D_2	PA_2
Emotional exhaustion$_{wave1}$	*0.891*					
Depersonalization$_{wave1}$	0.60	*0.698*				
Personal accomplishment$_{wave1}$	−0.22	−0.37	*0.797*			
Emotional exhaustion$_{wave2}$	0.70	0.43	−0.16	*0.903*		
Depersonalization$_{wave2}$	0.49	0.59	−0.31	0.65	*0.743*	
Personal accomplishment$_{wave2}$	−0.20	−0.22	0.51	−0.33	−0.33	*0.795*

All correlations are significant at the 0.01 level (two-tailed).
D, depersonalization; EE, emotional exhaustion; PA, personal achievement.

Table 3

Structural equation modelling: longitudinal models of the three burnout dimensions

Model	χ^2	d.f.	RMSEA	NNFI	CFI	AIC	CAIC
Stability model	3040.30	739	0.0663	0.9482	0.951	3334	4010
EE → D *and* EE → PA	3049.28	743	0.0662	0.9484	0.951	3341	3995
EE → D → PA	3051.98	743	0.0663	0.9483	0.951	3348	4001
D → PA → EE	3057.28	743	0.0664	0.9482	0.953	3350	4004
PA → D → EE	3057.10	743	0.0663	0.9482	0.951	3350	4003
PA → EE → D	3054.12	743	0.0664	0.9483	0.951	3353	4006

AIC, Akaike's information criterion; CAIC, consistent Akaike's information criterion; CFI, comparative fit index; χ^2, chi-square goodness-of-fit index; D, depersonalization; d.f., degrees of freedom; EE, emotional exhaustion; NNFI, non-normed fit index; PA, personal accomplishment; RMSEA, root mean square error of approximation.

from zero (i.e. absolute *Z*-value smaller than 1.96, $P > 0.05$): personal accomplishment → emotional exhaustion; depersonalization → emotional exhaustion; and depersonalization → personal accomplishment. This suggests that these paths do not add to the prediction of the dimensions of burnout in 2000.

The assumption of measurement invariance was assessed by examining the tenability of strong factorial invariance. The restriction of factor loadings to be time-invariant resulted in a significant increase in χ^2 [$\Delta\chi^2$ (d.f. = 17) = 50.0] (where d.f. = degrees of freedom) but it did not lead to a noticeable deterioration in any of the other fit measures. For instance, the RMSEA remained 0.065 over all models, whereas the NNFI only slightly improved, from 0.948 in the model with no restrictions, to 0.949 in the model with time-invariant factor loadings. This restriction on factor loadings therefore appears tenable. Restricting the item intercepts (and freeing the factor means on the second occasion) also resulted in a significant increase in χ^2 [$\Delta\chi^2$ (d.f. = 17) = 93.4], but, again, the other fit indices indicated that this restriction was acceptable. Because restrictions on measurement parameters over time did not result in a clear deterioration in model fit, it was concluded that strong factorial invariance was tenable over time.

Notwithstanding the evident fit of all models, definitive conclusions concerning the best-fitting model are

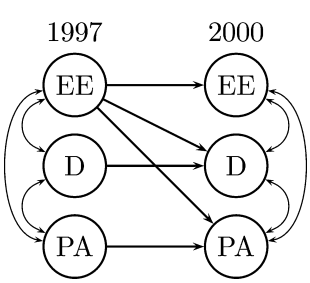

Fig. 1. Empirically based (ad-hoc) best-fitting model of the sequence of the burnout dimensions among dentists.

Table 4

Parameter estimates of the beta-weights for the baseline model (Wald test)

		EE 1997	D 1997	PA 1997
EE 2000	Beta estimate	0.832	−0.212	−0.067
	SE	0.056	0.146	0.048
	Z-value	14.870*	−1.448	−0.859
D 2000	Beta estimate	0.115	0.478	−0.101
	SE	0.033	0.086	0.047
	Z-value	3.448*	5.563*	−2.177**
PA 2000	Beta estimate	−0.065	0.077	0.528
	SE	0.032	0.082	0.046
	Z-value	−2.028**	0.915	11.474*

*$P < 0.01$; **$P < 0.05$.
D, depersonalization; EE, emotional exhaustion; PA, personal accomplishment; SE, standard error.

precluded because of the minute differences of the fit indices between models (Table 3). These small differences can be explained by the large number of parameters included in the complete model. Seeing that the measurement invariant longitudinal factor model fits the data quite well, it is warranted to reduce the number of parameters in the compared models by using the scale scores instead of the raw item scores (i.e. using the observed total scores instead of latent scores that are based upon the individual questionnaire item scores).

The results of the path-analysis using scale scores are reported in Table 5. In terms of RMSEA, only the empirically based, best-fitting model comes close to an acceptable fit (RMSEA < 0.06). When examining NNFI and CFI values, all models show acceptable (i.e. > 0.90) to good (> 0.95) fit. However, because fit indices are far less homogeneous between the models, a relative comparison between models is possible. Not surprisingly, of all models, again the empirically constructed model shows the overall best fit. Of the remaining models, emotional exhaustion → depersonalization → personal achievement and personal achievement → emotional exhaustion → depersonalization stand out as having the best relative fit. These models also had an absolute good fit according to the NNFI and CFI values. Between these two, the latter should be preferred for having the overall best-fit indices.

As a final explorative exercise, the iterative procedure to produce an empirically best-fitting model was repeated using the scale means as input values. The procedure resulted in a combination of emotional exhaustion → depersonalization with emotional exhaustion → personal achievement → depersonalization, effectively adding a subsequent personal achievement → depersonalization path. The model fit indices for this model are also included in Table 5, and not only show an extremely good absolute fit, but also an exceptionally better fit to the data relative to the other models.

Discussion

The main purpose of this study was to examine the sequence of the three MBI dimensions – emotional exhaustion, depersonalization, and personal accomplishment – in a longitudinal setting among dentists. Two methods were used to find the 'best sequence'. First, a completely empirically based best-fitting model was constructed. This resulted in a model in which emotional exhaustion not only leads to an increase in depersonalization, but also leads directly to a decrease in personal accomplishment (see Fig. 1). Second, a number of models specified in the literature were compared. Of these models, the results point to, but do not clearly differentiate between, the original model produced by Maslach *et al.* (8) in which emotional exhaustion precedes depersonalization, which in turn precedes personal accomplishment, and the model produced by De Vries (12), in which personal accomplishment triggers emotional exhaustion, which then triggers depersonalization (these are the first and the last models, respectively, shown in Table 1).

The empirical 'best-fitting' model found a relation between emotional exhaustion and personal accomplishment that contradicts earlier suggestions of a relatively independent role for personal accomplishment (35–37). A possible explanation for this finding may lie in the fact that only causal relations are tested. Synchronous development of emotional exhaustion and depersonalization was not explicitly tested, but such a mutual development could be at work. This would concur with the relatively high correlation that was found among dentists between emotional exhaustion and depersonalization in this study as well as in earlier research (21, 22). A number of other possible explanatory factors should be mentioned. First, the time between measurement points, as there was a 3-yr gap between Wave 1 and Wave 2 in the present study. The possibility cannot be rejected that different processes are at work (i.e. different models apply) in the short term and in the long term. Future research, employing both longer as well as shorter periods between waves, should provide further insight into possible shifts in the sequence from the short term to the long term. Second, the current models do not include so-called third variables (for example, person characteristics). Inclusion of such variables would further strengthen the causal inference (17) and provides a more comprehensive view on the relationship between emotional exhaustion and personal accomplishment.

Table 5

Structural equation modelling: longitudinal models of the three burnout dimensions, using scale means for analyses

Model	χ^2	Df	RMSEA	NNFI	CFI	AIC	CAIC
Stability model	18.57	4	0.0689	0.9742	0.9928	53	147
EE → D *and* EE → PA	26.42	4	0.0870	0.9596	0.9894	60	155
EE → D → PA	57.41	4	0.1334	0.9206	0.9742	90	185
D → PA → EE	38.58	4	0.1062	0.9382	0.9836	72	167
PA → D → EE	24.11	4	0.0824	0.9640	0.9904	58	153
EE → D *and* EE → PA → D	2.73	3	0.0082	1.001	0.9998	39	139

Scale mean scores for EE, D and PA were used in analyses.
AIC, Akaike's information criterion; χ^2, chi-square goodness-of-fit index; CAIC, consistent Akaike's information criterion; CFI, comparative fit index; D, depersonalization; d.f., degrees of freedom; EE, emotional exhaustion; NNFI, non-normed fit index; PA, personal accomplishment; RMSEA, root mean square error of approximation.

Third, a more general important note is that the data-driven model is best fitting only for the sample under study; the explorative, ad hoc procedure that was used capitalizes on chance and the resulting model should therefore be replicated in future studies.

Of the theoretically proposed models on burnout sequence that were compared, the results indicate that the models proposed by Golembiewski & Munzenrider (13) and Van Dierendonck *et al*. (16) do not adequately fit the data. In contrast, both the model proposed by Maslach & Jackson (10), as well as an alternative found among physiotherapists (12), were found to have a good fit on the data. Of these two models, a slight preference was found for personal accomplishment → emotional exhaustion → depersonalization. It is interesting to see that this model, originally found among physiotherapists, is also found to fit among dentists. In a number of work-related aspects, dental practitioners are similar to physiotherapists. To name a few of these aspects, within health care, both professions are based on an entrepreneurship position. Also, both dentists and physiotherapists have to deal with patients on a daily basis, often within a relatively confined working environment. And furthermore, both professions are built upon manual skills to a large extent, in contrast to, for instance, social workers or psychologists, for whom social, cognitive, and verbal qualities are key instruments for performance. The discussion on the degree in which personal accomplishment may serve as a burnout indicator among dentists is not new (5). Regardless of profession, personal accomplishment is defined as 'the evaluation of the relational skills in handling recipients, which may influence self-efficacy beliefs regarding future performance' (16, p. 49). It is imaginable that such general beliefs translate to more specific feelings about one's manual competence, even though the items on the personal accomplishment scale do not directly relate to any specific manual skills.

The current study stands out in a number of ways. As pointed out in the Introduction, given the paucity of longitudinal studies, the two-wave design adds to the current knowledge of the process of burnout, especially concerning dentists. Moreover, a strong emphasis was placed on methodological issues associated with multi-wave longitudinal research. Even though non-response is omnipresent, many recent longitudinal studies on burnout and work-related stress do not provide information on the exact handling of missing values (38–41). Others resort to naïve methods, such as case deletion (42, 43), probably because this is the default method for dealing with incomplete data in many statistical software packages. However, case deletion does not always yield unbiased estimates (44), is often considered inefficient (23), and does not properly account for the uncertainty that is associated with the occurrence of missing data (45).

From a preventive point of view, it is extremely important to gain insight into the mechanisms that are part of the burnout process among dentists. Burnout is considered a long-term possible consequence of having to deal with occupational stress. As was described previously in numerous studies, the dental profession is full of possible threats to the dentist's health, both mentally and physically (e.g. 46–49). The process of burnout is usually accompanied by gradual negative changes in one's emotional, cognitive, or behavioural patterns, or – most probably – a combination of these. Early recognition of this gradually developing process is difficult for both colleagues in the dental office, family and friends, as well as for the dentist involved. Moreover the working conditions under which many Dutch dentists operate – with no or only a few colleagues around – will not facilitate early recognition of the symptoms of burnout.

From this study, we can conclude that early signs of emotional exhaustion, as well as feelings of reduced personal accomplishment, should be taken as early warnings for burnout risk. However, because reduced personal accomplishment is a somewhat diffuse burnout dimension among dental professionals, emotional exhaustion is most likely to be the first effect of a pending burnout. This is in line with the notion that emotional exhaustion is the key dimension of burnout (3). The challenge for the dental profession lies, first, in further monitoring burnout risk in longitudinal designs in order to enable early intervention and, second, in developing tailor-made prevention and intervention programs specifically aiming at the needs within the dental profession.

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