

Health service research

When general practitioners don't feel appreciated by their patients: prospective effects on well-being and work–family conflict in a Swiss Longitudinal Study

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Abstract

Background: Impaired well-being and high work–family conflict are critical issues among GPs. This research examined an understudied psychosocial risk factor for these outcomes, namely GPs' perception that they invest more in the relationship with their patients than what they receive in return (i.e. lack of reward in their relationship with patients).

Objective: To test the effect of lack of reward as a risk factor for poor well-being and work–family conflict among GPs.

Methods: Longitudinal study (12 months time lag). 272 GPs in Switzerland [mean age 54.5 (SD = 8.3), 73% male] volunteered to participate in the study. 270 participants completed the baseline survey and 252 completed the follow-up survey. Of these, six retired between the baseline and the follow-up survey, resulting in a sample size of 246 participants at t2. Outcome measures were burnout, sleep problems, self-perceived health and work–family conflict.

Results: Strength and direction of prospective effects were tested using cross-lagged models. Lack of reward was related to an increase in emotional exhaustion ($\beta = 0.15$), sleep problems ($\beta = 0.16$) and work–family conflict ($\beta = 0.19$) and a decrease in self-perceived health ($\beta = -0.17$). Effects on depersonalization and personal accomplishment were not significant. Regarding reversed effects of impaired well-being on lack of reward, emotional exhaustion ($\beta = 0.14$) and self-perceived health ($\beta = -0.13$) predicted future level of lack of reward.

Conclusion: Lack of reward by patients is a risk factor in GPs' mental health.

Keywords. Depression/mood disorder, doctor–patient relationship, longitudinal, primary care, stress, work-related stress.

Introduction

Recent research shows that GPs have a higher prevalence of poor mental health, such as symptoms of a burnout, and are less satisfied with their work–life balance than the general population (1). Impaired mental health and a work–life imbalance not only have personal consequences, but may also affect other individuals such as patients and

family members. Low well-being and higher burnout scores in GPs, e.g. has been linked to lower empathy with patients (2), more patient dissatisfaction (3) and work–family conflict is associated with poor work performance and relationship dissatisfaction (4). Thus, GPs' risk for poor mental health and work–life balance are critical issues for themselves and their professional and private environment.

In line with the majority of occupational stress and health research, most studies of psychosocial factors as antecedents of impaired well-being and work–life imbalance have been based on the job demands control model (5) and hence focused on workload and job control. In a recent meta-analysis of the relationship between work characteristics and burnout among physicians, workload had the strongest association with emotional exhaustion, the core dimension of burnout (6). Less attention has been paid, however, to the role of the relationship between physicians and patients in the development of burnout and work–family conflict. In this study, we focused on a specific aspect of this relationship, namely the physicians' perception that they do not get enough rewards for their investments in the relationship with their patients. Our reasoning is based on the effort-reward imbalance (ERI) model of Siegrist (7) and the stress-as-offense-to-self (SOS) model developed by Semmer and colleagues (8). The ERI model suggests that individuals expect their perceived efforts such as a high workload to be reciprocated with rewards. As theorized by the SOS model, a particularly important reward is appreciation and esteem. Individuals strive to be esteemed and accepted by others and one's psychological well-being is strongly affected by the approval of others (9). Following this, lack of reward by their patients and the GPs' perception that they invest more in the relationship with their patient compared with what they receive in return, is assumed to have detrimental effects on physicians' health.

The research question of this paper is whether GPs' perception that they invest more in the relationship with their patients than what they receive in return (i.e. lack of reward in their relationship with patients) has negative effects on GPs' well-being and work–family balance. We examined these detrimental effects a longitudinal study. The large majority of research on the effects of psychosocial factors on GPs' health is based on cross-sectional data. Such studies are mute as to the direction of the causal effect (10). In contrast, longitudinal studies allow testing whether poor psychosocial factors lead to impaired health (e.g. lack of reward causes burnout) or whether GPs with impaired health experience their work conditions as particularly stressful (e.g. burned out physicians perceive their patients as particularly ungrateful). In this study, we focused on well-being (emotional exhaustion, depersonalization and personal accomplishment as symptoms of burnout; sleep problems; self-perceived health) and on work–family conflict.

Methods

Participants and procedure

A total of 272 self-employed GPs in Switzerland participated in the study. Participants were recruited from an official database of Swiss GPs who are responsible for providing epidemiological data to the Federal Office of Public Health ($n = 127$, participation rate: 71%), from members of Swiss cantonal associations of GPs ($n = 115$, participation rate: 61%), and by a public announcement of the study in a periodical for Swiss GPs ($n = 30$, number of readers and hence participation rate unknown). Participation in this study was voluntary and written informed consent was obtained from all participants. Participants received the baseline (t1) and the follow up (t2) survey by mail and returned it with a prestamped envelope. The time lag between the two surveys was 12 months. A total of 270 participants completed the baseline survey and 252 completed the follow-up survey (retention rate: 93%). Of these, six retired between the baseline and the follow-up survey, resulting in a sample size of 246 participants at t2. The majority of the sample was male (73%). Mean age of the participants at t1 was 54.5 (SD = 8.3, range: 34–73).

Measures

Lack of reward by patients was assessed with a measure of Bakker and colleagues (11) (3 items, e.g. 'How often do you feel you give your patients a lot of time and attention, but meet with little appreciation?'). To control for confounding psychosocial stress factors, we assessed workload with the ISTA (12) (4 items, e.g. 'How often are you under time pressure?'), patient demands with an adapted version of the CSS (13) (6 items, e.g. 'How often do you have patients that always demand special treatment?'), and interpersonal conflicts between GPs and their practice assistants and other physicians with Jehn's measure (14) (4 items, e.g. 'How much friction is there between you and practice nurses or other physicians in your practice?').

We used the Maslach Burnout Inventory (15) (MBI) to assess the three facets of burnout, namely emotional exhaustion (9 items, e.g. 'I feel emotionally drained by my work.'), depersonalization (7 items, e.g. 'I feel I treat some of my patients as if they were impersonal objects.') and personal accomplishment (6 items, e.g. 'I have accomplished many worthwhile things in this job.'). Sleep problems was assessed with the measure of Jenkins and colleagues (16) (4 items, e.g. 'How often in the past month did you have trouble falling asleep?'), self-perceived health was assessed with a single item from the SF-36 (17) ('In general, how would you say your health is?') and work–family conflict was assessed with a shortened form of the SWING (18) (3 items, e.g. 'How often does it happen that you find it difficult to fulfil your domestic obligations because you are constantly thinking about your work?').

Statistical analyses

Structural equation modeling analyses were conducted using the Mplus 7 program. Model fit was assessed by the comparative fit index (CFI), the Tucker–Lewis index (TLI) and the root mean square error of approximation (RMSEA). Good fit is indicated by values greater than or equal to 0.95 for CFI and TLI and less than or equal to 0.06 for RMSEA.

To examine the longitudinal effects, we conducted separate structural cross-lagged models (see Fig. 1) for each outcome variable (i.e. emotional exhaustion, depersonalization, personal accomplishment, sleep problems, subjective health and work–family conflict). Cross-lagged panel designs are considered the best way to understand the direction of effects (e.g. whether lack of reward is a cause or an effect of emotional exhaustion (10)). In cross-lagged models, a variable at Time 2 is predicted by the same variable at Time 1 (the autoregressor, reflecting the stability of the variable) and the other variable at Time 1. The cross-lagged paths indicate the effect of one variable on the other after controlling for the stability of the variables over time. In other words, it reflects the effect of one variable (e.g. lack of reward) on the change of the other variable (e.g. increase in burnout) across time. In our analyses, we adjusted for sex, age, workload, patient demands and conflict by regressing all variables at Time 2 on the confounders. Additionally, to account for shared variance among the predictors, the predictors at Time 1 were correlated. We used latent variable modeling to separate construct variance from measurement error. For constructs with more than six items we used three-item parcels as indicators for each construct because they produce more reliable latent variables than do individual items by reducing random error and thereby increasing the reliability of the structural coefficients of the model. Moreover, we accounted for variance due to measurement occasion by cross-sectionally correlating the disturbances of the corresponding factors at Time 2. To deal with missing values, we used full-information maximum likelihood estimation to fit models directly to the raw data, which produces less biased and

more reliable results compared with conventional methods of dealing with missing data, such as listwise or pairwise deletion.

Results

Descriptive statistics of the study variables are shown in Table 1. For most variables, there was no mean level change within 1 year, suggesting that on average, participants' work condition and psychological health stayed the same. As exceptions, workload and sleep problems significantly increased over time. To investigate the potential impact of attrition, differences on study variables were tested between participants who completed both assessments and participants who dropped out of the study. For only one variable (sleep problems), participants who dropped out reported higher values at

t1 than did participants who completed the full study ($d = 0.33$, $P < 0.05$).

The main focus of this study was on the longitudinal effects of lack of reward and well-being that were tested with structural cross-lagged models (Fig. 1). As shown in Table 2, all structural models provided a good fit to the data. Results of the structural models are presented in Table 3. Of particular interest are the cross-lagged effects of lack of reward (LoR \rightarrow Y) and of the outcome variables (Y \rightarrow LoR). After controlling for the confounders and the stability of the outcome, lack of reward had a significant prospective effect on emotional exhaustion ($\beta = 0.15$, $P = 0.017$), sleep problems ($\beta = 0.16$, $P = 0.037$), self-perceived health ($\beta = -0.17$, $P = 0.021$), and work-family conflict ($\beta = 0.19$, $P = 0.032$). However, the lagged effects on depersonalization ($\beta = 0.04$, $P = 0.611$) and

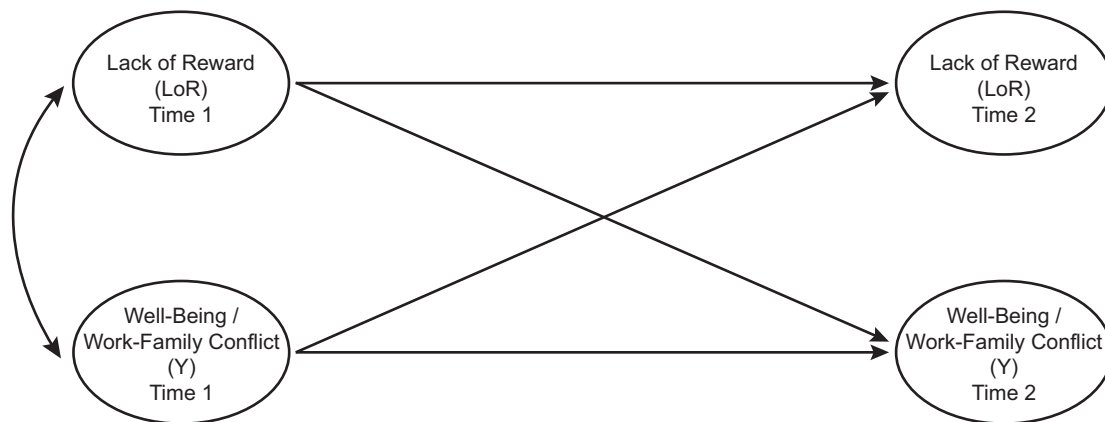


Figure 1. Structural cross-lagged model. For the sake of clarity, factor loadings, covariances between indicators at Time 1 and Time 2, the correlation of the disturbance factors, and the control variables (age, sex, workload, patient demands, and conflicts) are omitted.

Table 1. Descriptive statistics of the study variables among the Swiss GPs at the first ($N = 270$) and the second ($N = 246$) measurement occasion (time lag of 12 months)

	Range	Time 1	Time 2	r_{t1t2}
		Mean (SD)	Mean (SD)	
Lack of reward	1–5	2.29 (0.73)	2.23 (0.71)	0.67
Workload ^a	1–5	3.67 (0.83)	3.81 (0.81)	0.69
Patient demands	1–5	1.89 (0.68)	1.89 (0.70)	0.60
Conflicts	1–5	1.81 (0.87)	1.77 (0.90)	0.47
Emotional exhaustion	0–54	15.03 (9.66)	15.28 (10.37)	0.81
Depersonalization	0–30	6.32 (5.09)	6.30 (5.13)	0.67
Personal accomplishment	0–48	42.29 (5.07)	42.21 (5.08)	0.62
Sleep problems ^a	1–7	2.72 (1.23)	2.81 (1.27)	0.73
Self-perceived health	1–5	3.44 (0.92)	3.42 (0.92)	0.54
Work-family conflict	1–4	2.07 (0.66)	2.08 (0.64)	0.70

^aSignificant mean difference between Time 1 and Time 2 ($P < 0.05$). All correlations between the Time 1 and the Time 2 measures (r_{t1t2}) were significant ($P < 0.05$).

Table 2. Indices indicating whether the proposed models fit to the data

Model	χ^2	df	CFI	TLI	RMSEA
Emotional exhaustion	385.1*	239	0.96	0.95	0.048
Depersonalization	515.8*	341	0.95	0.95	0.044
Personal accomplishment	356.3*	239	0.96	0.95	0.043
Sleep problems	454.7*	288	0.96	0.95	0.047
Self-perceived health	226.4*	156	0.98	0.97	0.041
Work-family conflict	382.2*	239	0.96	0.95	0.047

CFI, comparative fit index; RMSEA, root mean square error of approximation; TLI, Tucker–Lewis index.

* $P < 0.05$.

Table 3. Standardized estimates of the structural coefficients in the models

Outcome (Y)	Cross-lagged effects		Stability effects		Effects of confounders on Y/LoR at Time 2				
	LoR → Y	Y → LoR	LoR → LoR	Y → Y	Sex	Age	WL	PD	CO
Emotional exhaustion	0.15*	0.14**	0.59*	0.79*	-0.07**/-0.05	-0.03/-0.05	0.06/0.04	-0.07/0.15**	-0.06/-0.03
Depersonalization	0.04	0.01	0.64*	0.70*	0.03/-0.04	-0.04/-0.06	-0.01/0.07	0.03/0.18*	0.12*/-0.01
Personal accomplishment	0.06	-0.04	0.62*	0.73*	0.02/-0.04	-0.03/-0.06	0.07/0.07	-0.08/0.18*	-0.15*/-0.02
Sleep problems	0.16*	0.03	0.63*	0.72*	0.05/-0.05	-0.03/-0.07	-0.01/0.07	-0.04/0.18*	-0.07/-0.02
Self-perceived health	-0.17*	-0.13*	0.60*	0.59*	-0.04/-0.06	0.03/-0.05	0.01/0.04	0.03/0.18*	0.02/-0.02
Work-family conflict	0.19*	0.14	0.59*	0.54*	-0.03/-0.06	-0.03/-0.06	0.24*/0.00	-0.05/0.19*	0.04/-0.02

CO, conflicts; LoR, lack of reward in relationship with patients; PD, patient demands; WL, workload; Y, outcome.

* $P < 0.05$; ** $P < 0.10$ (two-tailed).

personal accomplishment ($\beta = 0.06$, $P = 0.540$) were not significant. With regard to reversed effects, emotional exhaustion ($\beta = 0.14$, $P = 0.075$) and self-perceived health ($\beta = -0.13$, $P = 0.019$) predicted subsequent level of lack of reward. Results of the confounders were also of interest. Conflict had a prospective effect on depersonalization ($\beta = 0.12$, $P = 0.048$) and personal accomplishment ($\beta = -0.15$, $P = 0.026$) and workload predicted work-family conflict ($\beta = 0.24$, $P = 0.004$). Additionally, patient demands had a prospective effect on lack of reward ($\beta = 0.18$, $P = 0.021$).

Discussion

Summary

This study found negative effects of lack of reward by their patients on GPs' well-being and work-family conflict. Using a longitudinal study design, lack of reward has been linked to an increase in emotional exhaustion, sleep problems and work-family conflict, and to a decrease in self-perceived health. The prospective effect on emotional exhaustion, the core dimension of burnout, shows that lack of reward is likely to be a risk factor for the development of burnout. Interestingly, we found no significant effect on depersonalization and personal accomplishment. This indicates that GPs experiencing high lack of reward are still able to maintain high-quality relationships with their patients, however this exacts costs for their own well-being. Importantly, the negative effects of lack of reward emerged after adjusting for other prominent risk factors, such as a high workload, patient demands and conflicts with other doctors and practice nurses. It is noteworthy that conflicts with practice nurses and other physicians had a negative effect on depersonalization and personal accomplishment. Thus, interpersonal factors, both with regard to patients (i.e. lack of reward) and coworkers (i.e. conflicts), seem to play an important role in the development of burnout among GPs.

Comparison with existing literature and new insights

Our research extends previous knowledge about risk factors of impaired mental health among GPs in an important way. The present findings suggest that it is not only the daily burden of work—reflected by a high workload and demanding and difficult patients—that affects physicians' health. Rather, it is the physicians' perception that they do not receive the appreciation and esteem they deserve for all their burdens and the efforts they put into the relationship with their patients.

Using a cross-lagged panel design that allows testing different causal directions, we also found some evidence for reversed effects of poor well-being (high emotional exhaustion and self-reported health issues) on lack of reward. Thus, the present findings point to a vicious circle between lack of reward and impaired well-being: On the one hand, lack of reward likely impairs GPs' well-being; on the other, GPs with impaired well-being are likely to experience an increased lack of reward.

In general, little is known about the antecedents of GPs' perception of lack of reward. Our analyses showed that high patient demands are a risk factor for the experience of lack of reward in the future. Highly demanding patients may not be aware that they expect a special treatment for which the doctor also might expect more than the payment of the bill. However, the experience of lack of reward is not restricted to relationships with highly demanding patients. Previous research shows that doctors and patients have often a very different perspective of the doctors' communication skills (19). While a doctor may think that he or she was listening carefully to the patient, the patient might feel misunderstood and as

a result he or she responds in a reserved manner. This cold reaction, in turn, might be interpreted by the GP as lack of reward for his or her involvement (20). Furthermore, Halbesleben showed that low compliance and low involvement by patients is also linked to GPs' perception of that they invest more in the relationship with their patients than what they receive in return (21).

Implications for practice

We believe that the present findings also have important implications for the education of physicians. During medical training in hospitals, physicians experience various stress factors, such as high workload and low control, and hence may learn to cope with these factors under the supervision of senior physicians. In contrast, the relationship with patients and experienced lack of reward in this relationship is rarely the focus of training. As such, GPs may have no experience and skills to cope with this stress factor. Therefore, the stressful experience of investing more in the relationship with a patient compared to what they receive in return should already be addressed in medical training. Additionally, the vicious circle between lack of reward and impaired well-being clearly suggests that high stress and burnout should be addressed at an early stage to prevent a negative build up process between stress factors and low well-being.

Limitations

The present findings should be interpreted in the light of several limitations. First, all variables were assessed with self-report measures and not validated with concurrent objective measures. This said, it has been noted that self-report data is the most valid approach for assessing perceptual constructs such as lack of reward and internal states such as burnout (22). Nevertheless, future studies should attempt to collect data from multiple sources (e.g. workload reported by practice nurses, work-family conflict reported by family members).

Second, this study consisted only of two measurement occasions, covering a time lag of 1 year. Thus, we were not able to test whether the effect of lack of reward becomes larger with increasing time. In a recent meta-analysis on the effect duration of work stress on well-being, effects on psychological well-being tended to increase for about three years before declining (23). Thus, it is reasonable to assume that lack of reward also affects participants' level of depersonalization and personal accomplishment over a more prolonged time. Therefore, future studies may want to include more than two measurement occasions and cover a longer time period.

Third, due to space limitation, we were not able to include measures of all risk factors that have been shown in previous research on GPs psychological and physical health. However, we adjusted for the most prominent risk factor (i.e. workload (6)) and risk factors that are conceptually related to lack of reward (i.e. patient demands, conflicts). Nevertheless, future research may want to include additional risk factors that have been linked to burnout, such as lack of control.

Fourth, the study has been conducted in Switzerland and hence generalizability to other countries has to be tested. Nevertheless, it is reasonable to assume that the underlying mechanisms of the reported effects—namely that GPs (as human beings in general) strive to be esteemed and accepted and a lack of appreciation is stressful and detrimental to well-being—is universal (9), hence we believe that lack of reward in the relationship with patients is stressful for GPs in other countries as well.

Conclusion

In conclusion, our results indicate that a perceived lack of reward in the relationship with patients is a risk factor for GPs' well-being

and work-family conflict. Using longitudinal data and structural cross-lagged models, we found prospective effects of lack of reward on impaired well-being and high levels of work-family conflicts. Additionally, we found some preliminary evidence for a reversed effect of impaired well-being on lack of reward, suggesting a vicious circle.

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Declaration

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Ethical Approval: This study was approved by the local ethics committee (Ethikkommission beider Basel, EKBB; reference: 346/11). Participants provided written informed consent.

Conflict of interest: none.

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