Job attitudes and well-being among public vs. private physicians: organizational justice and job control as mediators

Tarja Heponiemi, Hannamaria Kuusio, Timo Sinervo, Marko Elovainio

National Institute for Health and Welfare, Helsinki, Finland

Correspondence: Tarja Heponiemi, National Institute for Health and Welfare, PO Box 30, 00271 Helsinki, Finland, tel: +358 20 610 7434, fax +358 20 610 7485, e-mail: tarja.heponiemi@thl.fi

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Background: The present study examined whether there are differences in job-related attitudes and well-being among physicians working in private sector and public sector. In addition, we examined whether psychosocial factors (organizational justice and job control) could mediate these possible differences in different sectors. Methods: Cross-sectional survey data from the Finnish Health Professional Study was used. A random sample of Finnish physicians included 1522 women and 1047 men aged 25–65 years. Outcome variables were job satisfaction, organizational commitment, psychological distress, work ability and sleeping problems. Job control and organizational justice were measured using established questionnaires. Series of regression analyses were performed and the mediational effects were tested following the procedures outlined by Baron and Kenny. Results: Physicians working in private sector had higher levels of job satisfaction and organizational commitment and lower levels of psychological distress and sleeping problems when compared with physicians working in public sector. Private physicians also had higher levels of organizational justice, which acted as a mediator behind more positive attitudes and better well-being in private sector. Private physicians had higher levels of job control but it did not act as a mediator. Conclusions: Private physicians feel better than public physicians and this is partly due to higher organizational justice in private sector. Public health care organizations should invest effort to increase the fairness in their organizations and management and pay more attention in improving the well-being of their employees, which could possibly increase the attractiveness of public sector as a career option.

Keywords: job control, organizational justice, physician well-being, private health care, public health care
The presence of control at work has been found to protect physicians from developing job dissatisfaction and psychiatric distress. High job control has also been associated, in other occupations, with higher organizational commitment, less job-related strain and less sleep disorders. In addition, a positive change in job control over a 4-year period was associated with higher levels of physical activity and self-rated health and lower levels of distress.

Justice perceptions and control opportunities might differ in public and private sectors and they may also be mechanisms behind dissimilar well-being and job-related attitudes in public and private sector physicians. Previous studies show the importance of these psychosocial factors as mediators in other occupations. For example, increase in job control acted as the mechanism by which improvements in mental health and sickness absence rates occurred after work reorganization intervention. In addition, organizational justice has been found to be an important mediator when predicting job satisfaction, occupational strain and sickness absence.

The present study examined whether there are differences in job-related attitudes (job satisfaction and organizational commitment) and well-being (psychological distress, work ability and sleeping problems) among physicians working in private sector and public sector. In addition, we examined whether potential differences in organizational justice or job control between the corresponding groups explain the possible differences in job-related attitudes or well-being.

**Methods**

**Study sample**

We drew a random sample of 5000 physicians in Finland (30% of the whole physician population), from the 2006 database of physicians maintained by the Finnish Medical Association (register covers all licensed physicians in Finland), as a part of the Finnish Health Professionals Study. The ethics committee of the National Research and Development Centre for Welfare and Health has approved the study. Questionnaires were posted in autumn 2006. Non-respondents were reminded and sent the questionnaire up to two more times. Responses were received from 2841 (57%) physicians. The sample is representative of the population from which it was drawn in terms of age, sex and employment sector. We excluded 272 respondents who had incomplete information. Thus, the final sample included 2569 physicians (1522 women, 1047 men) aged 25–65 years (mean = 45.6, SD = 9.9).

**Measurements**

Employer sector was assessed by asking participants their main occupation’s employment sector. Answer options were municipalities, state and private, which were coded as 0 = public employer (first two options) and 1 = private employer.

Job satisfaction was assessed with an average of six items derived from Hackman and Oldham. Job Diagnostic Survey on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The reliability α in this study was 0.81. Some examples of the items include: ‘I am satisfied with my personal growth and development in my work’ and ‘I am generally satisfied with my work’. Organizational commitment was measured with an average of Allen and Meyer’s Affective Commitment Scale including eight items, which were rated on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree) (α = 0.80). Two examples of the items are: ‘I would be very happy to spend the rest of my career with this organization’ and ‘This organization has a great deal of personal meaning for me’. Psychological distress was measured with the 12-item version of the General Health Questionnaire (GHQ) with answer options ranging from 1 to 4. Cronbach’s α reliability was 0.89 in this sample. We used the mean response score in the analysis. Work ability was assessed with an item from Work Ability Index asking ‘Assume that your work ability at its best has a value of 10 and 0 would mean that you could not work at all. How many points would you give to your current work ability (range 0–10)?’ Sleeping problems were measured with an average of four questions derived from the Jenkins scale. Respondents were asked how often during the last 4 weeks they had troubles falling asleep, were waking up several times per night, had troubles staying asleep including waking up too early and felt tired after usual amount of sleep. Scale ranged from 1 (‘never’) to 6 (‘every night’). Reliability α coefficient for this sample was 0.78.

Organizational justice was assessed with a scale developed by Colquitt. Overall organizational justice consisted of four subscales: (i) procedural justice (seven items, e.g. ‘Have you been able to express your views and feelings during procedures used to arrive at your outcome?’); (ii) interpersonal justice (four items, e.g. ‘Has the authority figure who enacted the procedure treated you with dignity?’); (iii) informational justice (five items, e.g. ‘Has the authority figure who enacted the procedure explained the procedures thoroughly?’); and (iv) distributive justice (four items, e.g. ‘Does your outcome reflect the effort you have put into your work?’). The items were rated on a 5-point Likert-scale, ranging from 1 (‘I totally disagree’) to 5 (‘I totally agree’), bigger values indicating higher justice. The items were all summed and averaged. Reliability α coefficient for this sample was 0.94.

Job control was measured by combining the two scales of skill discretion (six items) and decision authority (three items) derived from Karasek’s Job Content Questionnaire JCQ. Skill discretion measures how much the job requires skill, creativity, task variety and learning of new skills (e.g. ‘My job requires that I learn new things’). Decision authority measures the freedom to make independent decisions and possibilities to choose how to perform work (e.g. ‘I have a lot of say about what happens in my job’). The items were rated on a 5-point Likert-scale, ranging from 1 (‘I totally disagree’) to 5 (‘I totally agree’), larger values indicating higher control. The items were all summed and averaged. The reliability α coefficient for this sample was 0.77. Other variables measured were gender, age, specialization status (0 = not specialized, 1 = specialists or those who are at the present undergoing their specialist training) and employment type (0 = full-time employment, 1 = part-time employment).

**Statistical analysis**

To test the mediational effects, a series of regression analyses were performed following the procedures outlined by Baron and Kenny. The hypothesized mediating effects are supported if the following conditions are met: First, employer sector is related to outcome variables (job satisfaction, organizational commitment, psychological distress, work ability and sleeping problems). Second, mediating variables (job control and organizational justice) are associated with employer sector as well as with outcome variables. Third, adding mediating variables in the analysis reduces the association between employer sector and outcome. The analyses testing third condition were adjusted for gender, age, specialization status and employment type. All analyses were conducted using the SPSS statistical package 17.0.

As sensitivity analyses to find out whether the potential mediational effect of organizational justice was due to some particular justice subscale, we also ran similar kind of
regression analyses as above with all organizational justice subscales separately (procedural, informational, interpersonal and distributional).

**Results**

Table 1 shows the results of regression analyses regarding univariate associations. Physicians working in private sector were more satisfied and committed with their jobs and had less psychological distress and sleeping problems than physicians working in public sector. High levels of organizational justice and job control were associated with higher levels of job satisfaction, organizational commitment and work ability and lower levels of distress and sleeping problems. Women were more likely to have psychological distress and sleeping problems than men. Older age was associated with higher levels of job satisfaction and organizational commitment and lower levels of psychological distress and work ability. Specialized and those whose specialization was ongoing had higher levels of job satisfaction and organizational commitment than those who were not specialized. Part-time employees were less satisfied with their jobs; less committed to their organization; and had lower levels of work ability than full-time employees.

Employer sector was associated with organizational justice \((\beta = 0.22, P < 0.001)\) and job control \((\beta = 0.08, P < 0.001)\). Physicians working in private sector experienced higher levels of both organizational justice and job control.

**Mediating testing**

Above mentioned analyses showed that employer sector was associated with other outcome variables except work ability (first condition for mediation was met). In addition, mediating variables (job control and organizational justice) were associated with employer sector and with outcome variables (second condition for mediation was met). Table 2 shows the results regarding the testing of third condition for mediation. Because work ability was not associated with employer sector (first condition for mediation was not met), it was not included in mediational analyses. We did find a clear attenuation in the associations between employer sector and outcome variables when the effect of organizational justice was taken into account. This indicates that organizational justice may have a significant role in the relationships between employer sector and outcome variables. We found that the association between employer sector and outcome variables was robust to adjustments for job control. Only slight attenuation was found when job control was added into the models.

As sensitivity analyses, we additionally analysed whether the meditational effect of organizational justice was due to some particular subscale. The results of these analyses can be seen in table 3. Of the subscales, the biggest attenuation could be detected in the association between employer sector and job satisfaction when procedural justice was added into the model. Interpersonal and informational justice attenuated most the association between employer sector and organizational commitment. There were no substantial subscale differences regarding the association between employer sector and psychological distress. Distributional justice had the strongest effect in the association between employer sector and sleeping problems.

**Discussion**

The present study found that physicians working in private sector reported better well-being and more positive job-related attitudes than physicians working in public sector. In addition, we found that organizational justice perceptions were higher in private sector and seemed to act as mechanisms behind more positive job-related attitudes and better well-being in private sector compared to public sector. Private sector physicians also had more opportunities to control their jobs, but it did not act as a mediator for their more positive attitudes and better well-being.

We found that physicians in private sector were more satisfied and committed to their jobs than physicians working in public sector. Moreover, private physicians had lower levels of psychological distress and sleeping problems than public sector physicians. Our results are in line with

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<tr>
<th>Table 1</th>
<th>Results of regression analysis regarding univariate associations of study variables with attitude and well-being indicators</th>
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<td></td>
<td>Job satisfaction&lt;input&gt;&lt;br&gt;Organizational commitment&lt;input&gt;&lt;br&gt;Psychological distress&lt;input&gt;&lt;br&gt;Work ability&lt;input&gt;&lt;br&gt;Sleeping problems&lt;input&gt;</td>
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<tr>
<td>Private employer&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.08 &lt;0.001</td>
</tr>
<tr>
<td>Organizational justice</td>
<td>0.39 &lt;0.001</td>
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<tr>
<td>Job control</td>
<td>0.59 &lt;0.001</td>
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<tr>
<td>Gender&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.00 0.824 -0.03</td>
</tr>
<tr>
<td>Age</td>
<td>0.11 &lt;0.001</td>
</tr>
<tr>
<td>Specialization&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.05 0.007 0.09</td>
</tr>
<tr>
<td>Part-time employment&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-0.05 0.012 -0.09</td>
</tr>
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<sup>a</sup> Coded 0 = public employer, 1 = private employer  
<sup>b</sup> Coded 0 = man, 1 = woman  
<sup>c</sup> Coded 0 = not specialized, 1 = specialized or specialization ongoing  
<sup>d</sup> Coded 0 = full-time employment, 1 = part-time employment
previous studies showing better work climate, less problems in connecting work and family life, and less burnout among private physicians when compared with public physicians. Previously, it has also been found that physicians who are satisfied with their jobs are less willing to change from public sector to private sector than physicians who are not satisfied. In addition, wage and factors related to appreciation and identity have been found to be associated with physicians choice to work either the public or private sector.

We showed that higher level of organizational justice in private sector was partly responsible for more positive attitudes and better well-being in private physicians when compared with physicians in public sector. More specifically, of the various justice dimensions, procedural justice seemed to explain best the differences in job satisfaction, interpersonal and informational justice the differences in organizational commitment and distributive justice the differences in sleeping problems between public and private physicians. In line with our results the previous studies also highlight the importance of organizational justice, for example, among nurses there was a buffering effect of interactionally fair treatment on insomnia reactions to underpayment and among students procedural justice perceptions were partly responsible for participation’s effects on job satisfaction.

Our results suggest that by improving organizational justice public health care organizations could improve physicians’ well-being and attitudes towards their job and, hence, maybe increase public sector’s attractiveness as a career option. For example, organizations could invest in supervisor training, particularly because previous studies have shown that leaders can be trained to act in a more just manner and this in turn improves subordinates’ attitudes and behaviour. Fairness in organizations can also be improved by giving open information, practicing two-way communication and using meeting procedures, where physicians can express their opinions in matters that involve them. Similarly, it is important to give justifications to decisions that have been made and pay attention to consistency. Injustice has, besides health and well-being, also been associated with quality and productivity of health care work, thus putting effort to work’s psychosocial factors is of importance also for organizational outcomes.

Our results suggest that to improve physicians’ well-being at work, management in public health care organizations should pay more attention to the working conditions of their employees. A study among health care staff showed that large health organizations have worse effect to mental health than small ones and that mental health is better with greater co-operation, better communication, more performance monitoring, a stronger emphasis on training and allowing staff more discretion over their work. Firth-Cozens suggested, for example, improvements in management styles and culture, systems for early recognition, team development, changes in selection procedures and interventions during training to improve the well-being of physicians.

Because the present study was cross-sectional, we cannot draw any causal inferences. It is possible that self-selection of physicians to one of the two sectors would explain part of our results, however, that would mean that people with high levels of distress and sleeping problems would be more prone to work in public sector, which we find quite unlikely. It could also be possible that private sector organizations would be highly selective of the physicians they employ but due to chronic shortage of physicians in Finland they may have big difficulties to do so. However, even small self-selection effects may be part of the explanation of our differences. The present study also relied on self-reported measures, which may lead to problems associated with an inflation of the strengths of relationships and with the common method variance. However, to minimize problems with self-reports, we used well-known validated measures that have shown good reliability. Moreover, although we controlled for age, gender, specialization status and part-time employment, we cannot rule out the possibility of residual confounding. For example, the fact that we were not able to identify the organizations that physicians worked in may have confounded our results. It is possible that many respondents worked at the same large organization and if this organization at the same time also functioned poorly and was from the public sector this may have inflated the results showing that public sector physicians feel worse than private sector physicians. Besides that, organizational level may also affect the relationship between shared organizational characteristics and the outcomes. In addition, physicians in private sector have better income prospects which may have confounded our results; however, we examined one at the time the effects of different subscales of organizational justice and we found that distributional justice (fairness of pay) did not emerge as more important than other subscales.

In addition, we had no data about the specific differences in the nature of the work among public and private sectors. There are large differences in work and client structures among public and private sectors. In Finnish health care system, municipalities have the responsibility to arrange care services for all citizens. To small extent, municipalities buy services from private sector, but most of services (71% of out-patient physician visits and 95% of inpatient care periods) are produced by municipalities. Private sector consists of two main parts: occupational health services in which employers provide services for their employees (no charge for employees)}
and private surgeries where clients themselves purchase major part of care or by voluntary insurance. Clients in private sector are more likely to be from higher income classes, and to have less severe health problems. Public sector takes care of elderly people, patients with multiple problems or comorbidities, unemployed, etc. Public sector is also responsible for the acute care, which has its effect on organizing care. Thus, we may suppose that several sources of distress are at lower levels in private sector. For example, as municipal organizations are taking care of the acute care, stress from on-call is higher. In addition, in private sector working part time is more frequent and physicians’ work time autonomy is higher.

In absolute terms, some of the effect sizes (standardized $\beta$ coefficients) of our results seem somewhat small. However, there are at least two reasons why very high effect sizes cannot even be expected. First, our outcomes are multifactorial, thus, variance in them is induced by several other factors besides the ones we used. Second, our participants were mainly healthy working adults who probably do not present the extreme ends of outcomes used here. Finland belongs to the same family as other Scandinavian countries and the UK regarding institutional structure and the financing of the health care system. Generalizing our findings to countries with different health care systems should be done cautiously. It should also be noted that most previous studies that have examined the association of employer type with physician well-being and attitudes were conducted in Scandinavian countries. Future studies are needed to confirm our findings also in different health care systems.

Conclusions

Our results show that physicians feel better in private sector than in public sector. Physicians in private sector were more satisfied with their job, more committed to their organization, less distressed and had less sleeping problems compared to physicians working in public sector. These differences were partly due to higher levels of perceived organizational justice in private sector when compared to public organizations. According to our results, public health care systems should pay more attention in improving the well-being of their employees and the psychosocial profile of their organizations or there is a danger that staff soon gets lost to the private sector. Especially, improving organizational justice in public health care sector is of importance and could possibly help to increase the attractiveness of public sector as an employer.

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Conflicts of interest: None declared.

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