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Sickness absence

Bekker, M.H.J.; Rutte, C.G.; van Rijswijk, K.

Published in:

Psychology, Health and Medicine

Publication date:

2009

Document Version

Publisher's PDF, also known as Version of record

[Link to publication in Tilburg University Research Portal](#)

Citation for published version (APA):

Bekker, M. H. J., Rutte, C. G., & van Rijswijk, K. (2009). Sickness absence: A gender-focused review. *Psychology, Health and Medicine*, 14(4), 405-418.

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Psychology, Health & Medicine

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713441652>

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Online Publication Date: 01 August 2009

To cite this Article Bekker, Marrie H. J., Rutte, Christel G. and van Rijswijk, Karen(2009)'Sickness absence: A gender-focused review', Psychology, Health & Medicine, 14:4, 405 — 418

To link to this Article: DOI: 10.1080/13548500903012830

URL: <http://dx.doi.org/10.1080/13548500903012830>

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Sickness absence: A gender-focused review

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(Received 16 September 2008; final version received 1 May 2009)

Women compared with men are generally considered to have higher sickness absence rates. Also determinants of sickness absent may differ between the sexes, a relevant area of knowledge for organizations that want to fine-tune particular measures to particular determinants. The present article offers a review of the literature regarding the relationships between sickness absence and gender. Various explanations mentioned in the literature are discussed using a classification derived from the Multi-Facet Gender and Health Model. Women compared to men seem indeed more frequently absent at work but this depends on countries, age – and professional groups, and seems restricted to short-term absence. Main conclusions with respect to future research concern the desirability of context-sensitive research and the usefulness of short-term *versus* long-term absenteeism as an outcome variable. Additionally, we recommend to further investigate the effects of organizational and psychosocial gender-related work characteristics, gender-bias in diagnostics and treatment, as well as gender differences in specific person-related factors interacting with gender differences in work-related daily life factors.

Keywords: gender; sickness absence; sex differences; burnout; multiple roles

Introduction

The increasing interest in sickness absence comes as no surprise given its costly and disruptive nature for organisations, society, and the individual, especially in case of long-term absenteeism. Particularly, sickness absence within health care has received much attention, maybe because it occurs rather frequently (e.g. Bourbonnais, Comeau, Vézina, & Guylaine, 1998; Greenglass, Burke, & Fiksenbaum, 2001; Tummers, van Merode, & Landeweerd, 2002) and radiates a serious threat: Who cares for the sick and disabled if health care workers are not available anymore?

In the literature, distinctions have been made between several types of absenteeism (e.g. excused *versus* unexcused and voluntary *versus* involuntary absenteeism; for a review, see Johns, 1997). Sickness absence is one form of excused absenteeism. It is medically certified and generally considered to involve several phenomena simultaneously, namely objective health status, perceived health, health behavior, and social behavior including coping with stress and conflicts (e.g.

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Harrison & Martocchio, 1998). Within this review, we focus on sickness absence and its relationship with gender.

Although statistics from several Western countries, almost unequivocally, show higher rates of sickness absence for women compared to men¹, explanations for these figures vary in terms of types of factors. Moreover, the available literature suggests that absence behavior is influenced most strongly by factor combinations or interactions (see also Fried, Melamed & Ben-David, 2002; Johns, 1997).

To obtain a comprehensible overview encompassing the various factor types mentioned in the literature we use a classification based on the Multi-Facet Gender and Health Model by Bekker (2003). This model, developed for classifying the multiple, possible ways in which biological, psychological, and socio-cultural factors together influence health-related sex differences in general, is now focused on sex differences in sickness absence specifically (Figure 1). Following the model, the relationship of sickness absence and being male or female (sex) is influenced by biological sex differences (i.e. having a female or male body), gender (i.e. internalised, socio-cultural meanings of femininity and masculinity), and various sets of possible, mediating factors between gender and the outcome variable. These respective factor sets are: Sex differences in daily life and/or social position; (Gender-specific) Person-related factors; and Gender bias in diagnostics, statistics, common sense, and treatment. Although the categorization of certain factors may seem arbitrary, the model can be helpful in disentangling them and in describing and hypothesizing their relationships. Reviewing the literature in this way, we aim to answer the question what evidence has been obtained for several explanations. This seems relevant since, to date, not much attention has been paid to the mechanisms behind the associations between sickness absence and gender (Allebeck & Mastekaasa, 2004). Given the high – although of course not exclusive – prevalence of sickness absence in the health care sector, together with its higher female employment rate (e.g. Evans & Steptoe, 2002; Mastekaasa, 2000; Vagg, Spielberger, & Wasala, 2002), we will pay some attention to factors operative in that sector.

Literature search and inclusion criteria

We selected relevant empirical articles using computer and manual searches. Computerized searches were performed in the PsycInfo database, starting from 1998 to cover the latest decade, using the following terms: *absenteeism*, respective *sickness absence and (sex differences; gender; women; men)*. Furthermore, the reference lists of the studies included were manually searched for other relevant publications. Studies were selected if they investigated sex differences in sickness absence or if they provided relevant contextual information. Studies that investigated long-term as well as those investigating short-term sickness absence were included.

Review of the literature

Having a male or female body: For example, pregnancy and menstruation

One type of explanations for the higher rates of sickness absence among women compared to men refers to physical sex differences ('female/male Body', Figure 1). The question whether women more than men suffer from biological sex-related health problems implying sickness absence, actually concerns (sex differences in) objective health, health perception, and health behavior. As is well-known, the

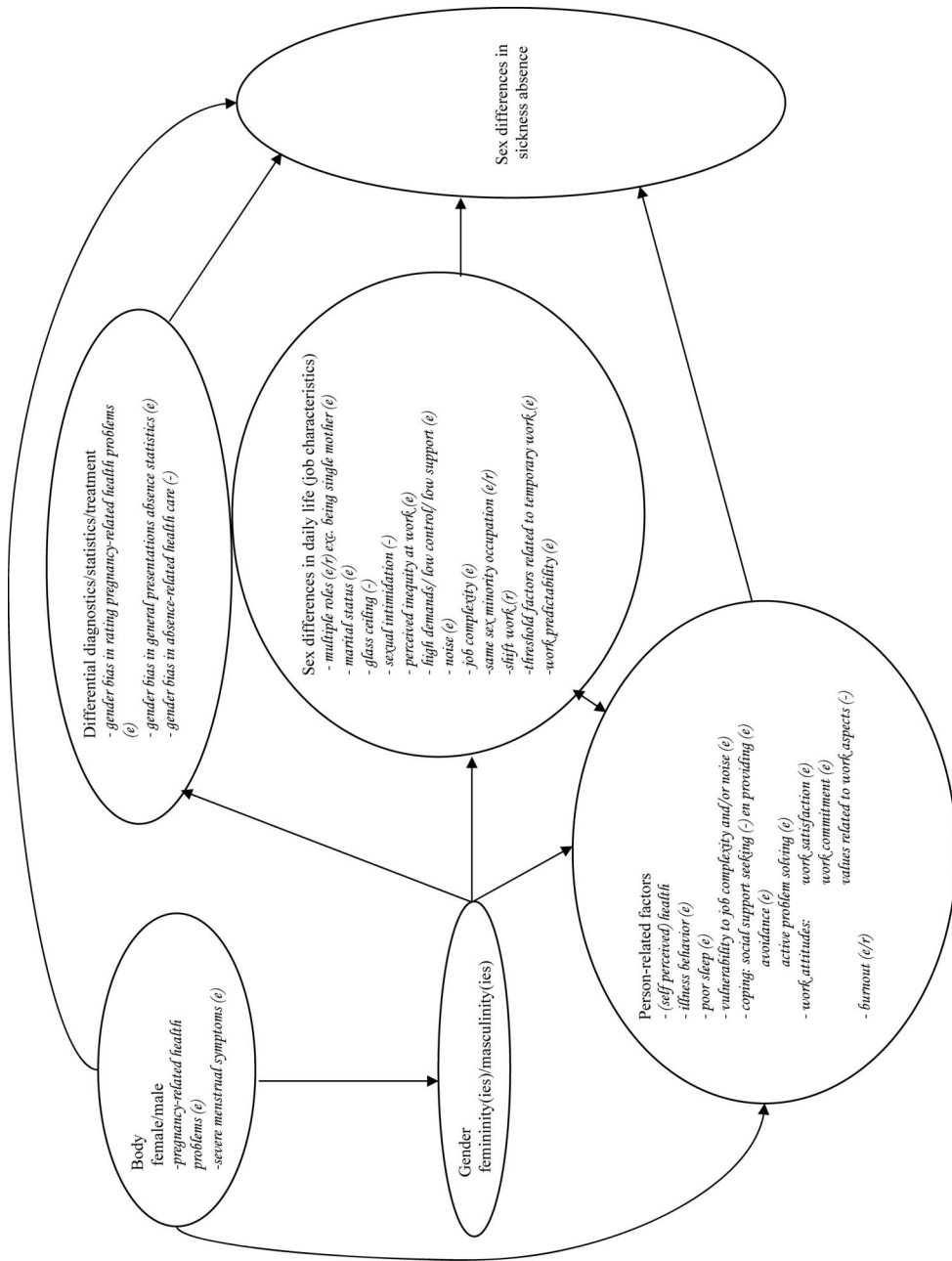


Figure 1. Multi-Facet Gender and Sickness Absence Model (Adapted from the Multi-Facet Gender and Health Model (Bekker, 2003). Note. e, supported by empirical evidence; r, refuted by empirical evidence; -, evidence lacking; hypothesized in the literature.

health literature has extensively been focusing on women as the 'sicker sex'. However, critical examination of the various diagnostic categories for health problems used by daily practitioners yielded the conclusion that many figures exaggerate the actual sex differences because of the inclusion of reproduction-related health problems (e.g. Gijsbers van Wijk & Kolk, 1997; Verbrugge, 1989). Also, pregnancy-related health problems related to sickness absence are under discussion. For example, Sydsjoe, Sydsjoe, and Alexanderson (2001) showed that pregnant women (5%) had a higher cumulative incidence of sickness absence (0.64) compared with all women (0.18), accounting for 20% of the women listed as absent because of sickness. Also, the duration of sickness absence was longer among the pregnant women compared to all women from the sample (44.8 days *versus* 9.7 days).

Other studies showed the impact of menstruation-related health problems on absenteeism. For instance, Busch, Costa, Whitehead, and Heller (1988) found, among nursing students aged 18–39 years, that severe menstrual symptoms, particularly dysmenorrhea, impacted absenteeism, and health care seeking. Remarkably, severe premenstrual symptoms, with a prevalence of 44%, did not substantially influence absenteeism. Other studies, e.g. Dean, Borenstein, Knight, and Yonkers (2006) found PMS to seriously impact work productivity, which does, however, not necessarily affect presence at work.

Of course, pregnancy- and menstruation-related health problems are not totally attributable to biological sex differences but also reflect person-related characteristics like illness behavior (e.g. Mastekaasa & Olsen, 1998; Whitehead, Busch, Heller, & Costa, 1986). Additionally, aside from reproduction related conditions also other biological sex differences might contribute to sex differences in sickness (absence) (e.g. see Feeney, North, Head, Carner, & Marmot, 1998; and <http://www.gendermedjournal.com/issues/suppl.html>).

Gender

Also gender (internalized socio-cultural meanings of femininity and masculinity) is possibly related to sickness absence. The relationship might be direct, but also indirect, for example via gender bias in diagnostics, statistics, common sense, and treatment; via gendered daily life factors; and via gendered person-related characteristics (see Figure 1). Below we will discuss all these pathways separately.

Direct gender effects

Direct effects of gender on sickness absence sex differences might occur in the form of gender-role orientation. In a study by Evans and Steptoe (2002), sickness absence appeared positively related to expressivity (here: femininity, see also Spence & Helmreich, 1978) and negatively to instrumentality (here: masculinity). Aside from the question whether scales measuring one-dimensional masculinity and femininity concepts can still be considered valid measures of gender-role orientation (see Bekker, 2003), the perspective of gender role orientation in the field of absenteeism deserves further attention, also because of its relation with work-related gender-role stress (see Bekker, Hens & Nijssen, 2001) as well as sex differences in coping (Bromberger & Matthews, 1996).

Indirect gender effects: Gender-bias in diagnostics, common sense, statistics, and treatment

In their study on the relationship between pregnancy and sickness absence, Sydsjoe, Sydsjoe, and Alexanderson (2001) were able to identify only 46% of all pregnancy related sickness absent women by using the companies' sickness certificates. These results imply that statistics with respect to sickness absence in women might, at least partly, reflect pregnancy-related health problems rather than general morbidity.

Another manifestation of gender bias in the literature on sickness absence but also within common sense, is the consistent focus on the higher rates in women compared to men. Many studies indeed show higher general rates of sickness absence among women, however, a refinement of this general view seems in place. For example, studies show that men have a higher sickness absence rate compared to women's in several countries (Barmby, Ercolani, & Treble, 2000); that the proportions of male to female sickness absence depend on age (men being more absent among workers aged 55–64 and women more among those aged 20–54; Bliksvår & Helliesen, 1997); and that men are over-represented in long-term absence (Olsen, 1995) whereas female excess in sickness absence are due to relatively short absence spells (Laaksonen, Martikainen, Rahkonen, & Lahelma, 2008).

An additional possible manifestation of gender-bias regarding sickness absence concerns differential diagnostics and treatment of male and female workers by employers, general practitioners, and medical examiners. Verdonk, de Rijk, Klinge, and de Vries (2008) interviewed a small group of women on sickness absence, who appeared to work overtime due to 'workaholism' or to meet the supervisor's expectations, resulting in mental health problems and social isolation. Taking a sickness leave promoted their recovery but their social isolation as well. A lack of adequate support from the workplace and from insurance professionals deteriorated their conditions. Although the relevance of research to such issues is widely recognized, to our knowledge no other, more large-scale studies – including also male participants – are available yet.

Indirect gender effects: Sex-differences in daily life and social position

Another explanatory category relevant for sex differences in sickness absence concerns possible sex differences in degree and/or nature of daily life stressors. These factors thus mediate the relationship between gender and sickness absence (Figure 1).

A popular viewpoint is that women, more than men, are confronted with the 'double burden' of combining work and family. For general literature reviews on multiple roles, gender and health, we refer to Barnett (1998) and Voydanoff (2002). Here, we confine the discussion to implications for sickness absence.

Mastekaasa (2000) found only little support for the idea that combining job and family responsibilities would imply role-conflict and overload resulting in health problems and withdrawal from work. Only single women with children compared to those without children were more at risk for work disability. The review by Mastekaasa and Olsen (1998) on the relationship between absence behavior and having children yielded mixed results for the U.S. as well as Scandinavian countries, with some studies showing a positive relationship while others did not. Their own study neither confirmed any association. Dutch data (LISV, 2000) showed that

having children implied a higher risk for work disability not only in women aged 25 to 35 years, *but also* for men in this age group. For men and women in all other age groups, having children was negatively related with work disability indicating a protective effect. The specific effect in age group 25–35, that with young children, might be due to poor sleep, a factor proven to be clearly related to absenteeism (e.g. Asplund, Marnetoft, Selander, & Akerstrom, 2005; Linton & Bryngelsson, 2000). An extensive review on sickness absence (Allebeck & Mastekaasa, 2004) again concluded – although not having gender as primary focus, that the results of existing studies on the relationship between having children and sickness absence are inconclusive.

In summary, although there are some mixed results, evidence for a relationship between having children and sickness absence is scarce. This does not imply the absence of sex differences in stress and/or types of stressors related to work-family conflicts (Vagg, Spielberger, & Wasala, 2002; see also Bekker, de Jong, Zijlstra, & Van Landeghem, 2000; Lundberg & Frankenhaueser, 1999), neither the absence of a ‘healthy worker’ (or rather: ‘healthy combiner’) effect: that those unable to cope with combining work and family may withdraw from work. Neither ruled out can be a lower availability of coping resources for employed women in stressful situations (Väänänen, Toppinen-Tanner, Kalimo, Mutanen, Vahtera, & Peiró, 2003; see also *Indirect gender effects: (Gendered) person-related factors*).

There are indeed several indications that, within a work context, more social support seeking implies better health, more stress reduction (Bekker et al., 2001; Bellman, Forster, Still, & Cooper, 2003; Taylor et al., 2000), and less sickness absence (see Moreau, Valente, Mak, Pelfrene, De Smet, De Backer, & Kornitzer, 2006). Some studies (Niedhammer, Bugel, Goldberg, Leclerc, & Guéguen, 1998; Väänänen et al., 2003) showed that a low level of coworkers’ support was related to higher levels of sick leave in men. Furthermore, supervisor’s support has been found to be a strong predictor of women’s absenteeism in some service sector occupations (Väänänen et al., 2003).

Regarding the work side of daily life, many other sex differences seem relevant for sickness absence, concerning types of and degrees of exposure to work-related stressors (e.g. Bekker, Hens, & Nijssen, 2001). For example, women are more often confronted with lack of career prospects (‘glass ceiling’), sexual intimidation, and specific risky work circumstances (e.g. high emotional demands, see next section). The specific relationships of these various stressors with sickness absence are still rather unknown, but when considered at a more general level: in terms of inequity at work, an association with absenteeism has clearly been established (e.g. Geurts, Schaufeli, & Rutte, 1999).

In general, men and women are involved in different jobs with different characteristics that might contribute to sex differences in sickness absence. Still typical for today’s labour market is a vertical- as well as horizontal sex segregation, i.e. generally men, compared to women, have higher positions and jobs with more opportunities for upward mobility (United Nations, 2000). In addition, men and women work numerically and in different sectors in professions (Gjerdingen, McGovern, Bekker, Lundberg, & Willemsen, 2000): women mainly within the health, cleaning, educational and clerical services, and men within technical, financial, managerial, and agricultural professions. Working in jobs characterised by high mental as well as emotional demands together with low control (Karasek, 1979) and low support (Johnson & Hall, 1988), implies

higher risk for sickness absence (e.g. see De Jonge, Reuvers, Houtman, Bongers, & Kompier, 2000; Gimeno et al., 2004; Janssen & Nijuis, 2001; LISV, 2000; 2001). Especially the high workload among health care and educational workers, together with its implications for job satisfaction and burnout, has been well documented (e.g. Armstrong, Cameron, & Horsburgh, 2001; Greenglass et al., 2001). Bekker, Croon and Bressers (2005) examining the role of work- and care-load (total work-load) and other gender-relevant factors in emotional exhaustion and sickness absence in 404 male and female nurses, found that, despite current stereotypes, sickness absence was not higher in women; nor appeared more at risk for emotional exhaustion. Total workload appeared to predict emotional exhaustion and thus sickness absence in both men and women. Ala, Vahtera, Linna, Pentti, and Kivimaki (2005) showed that good control regarding work-time reduced the adverse effect of work stress on sickness absence, especially for women. However, in general women have less control over work-time than men (SCP, 2000). Other, related job characteristics possibly contributing to sickness absence are lower salary and prestige (Emslie, Hunt, & Manintyre, 1999) and fewer learning opportunities at work (Matthews, Hertzman, Ostry, & Power, 1998), factors to which probably more women than men are exposed.

Considered from perspectives like perceived inequity and disadvantageous job characteristics, sex differences in morbidity and sickness absence might simply disappear if both sexes would occupy the same occupations to the same extent ('differences-in-exposure hypothesis'; Emslie et al., 1999). On the other hand, few studies indicate that the sex difference in absenteeism holds, even when both sexes do the same job (e.g. Alexanderson, Leijon, Akerlind, Rydh & Bjurulf, 1994) and/or are exposed to the same stressors. This agrees with the 'differences-in-vulnerability' hypothesis, assuming sex differences in responses to or anticipation of similar stressors (see '*Person-related factors*', Figure 1).

For example, Fried et al. (2002) found a three-way interaction-effect of noise, job complexity, and gender on sickness absence supporting the idea that a job environment characterized by noise and job complexity is detrimental to employees' health; and that women compared to men are more likely respond to these stressors by taking sick leave. The authors interpreted women's behavior as preventive health behavior, and discussed the detrimental effects of men's behavior for sickness absence on the long run. The recent study by Laaksonen et al. (2008) however, did – agreeing with the aforementioned results by Bekker et al. (2005), not support any higher vulnerability to work- or health-related problems in women than in men. High physical demands impacted men's and women's sickness absence equally. Recently, Vahtera et al. (2006) showed that exposure to a stressful event (death or severe illness in the family) was associated with a greater increase in sickness absence and a longer recovery period among women than among men. The aforementioned comparative study of men and women in identical jobs and work places ('fixed effects method'; Mastekaasa & Olsen, 1998) also supports the differences-in-vulnerability hypothesis. Women appeared to have between 1.3 and 1.7 times as much absence than men. Of course, 'real fixation', i.e. completely ruling out sex differences in occupations and work places, may, due to current sex-segregation within the labour force, only be possible in the very far future. Nevertheless, as the authors put forward themselves, their findings agree strikingly with the sex-differences reported in other studies on gender and health (e.g. Gijsbers van Wijk & Kolk, 1997).

In summary, results of studies regarding sex differences in vulnerability may be mixed due to sex differences in positions across professional groups, and the various types of stressors and impact measured.

Several authors have discussed whether sex differences in work stress – if existing – stem from specific gender-related job characteristics (as mentioned above), or rather from such more general, psychosocial work environment characteristics as the numerical and cultural domination by one sex or the other. For example, Hunt and Emslie (1998) found that women working in female minority occupations suffered more than men in these same jobs from psychological distress. Vice versa, women in male-minority occupations were, compared with men, better off. Results by Evans and Steptoe (2002), obtained among women working in a male-dominated occupation (accountancy) and men working in a female-dominated occupation (nurses), support this point of view. Here, the numbers of work hassles were greater in male than in female nurses, as well as in female compared with male accountants. Additionally, female accountants reported the highest anxiety levels, whereas the highest incidence of sickness absence was in male nurses. In accordance, Sanders and Nauta (2004) found that a team's gender similarity related positively to social cohesiveness, which in turn related negatively to short-term absenteeism. Contrary, Mastekaasa (2005) found men's sickness absence to be largely *unrelated* to the workplace's gender composition. Women's sickness absence tended to be higher in female-dominated workplaces, but the relationship was weak. The author suggestion that the numerical domination of one sex might lead to 'women's' and 'men' jobs with maybe different cultures concerning absenteeism agrees with Lambert's (2001) observation that workplaces differ in their permissiveness regarding staying at home because of feeling unwell. Controlling for gender in a culture in which voluntary absenteeism is quasi-legitimate was indeed found to be associated with a higher absence rate (Gaziel, 2004).

Another more general work characteristic playing a differential role in both sexes' sickness absence might be whether one's job is temporary or permanent. Gimeno et al. (2004) found sickness absence rates to be higher in permanent than non-permanent employees. Virtanen et al. (2001), after controlling for self-rated health, found that female, but not male, temporary employees had a lower rate of sickness absence than permanent employees. As the authors themselves also suggested, this clearly illustrates that sickness absence should not be considered in terms of morbidity solely, but definitely also in terms of decision behavior determined by coping preferences, varying thresholds of taking sick leave, or working while ill.

Finally, a longitudinal study by Nielsen, Rugulies, Christensen, Smith-Hansen, Bjorner, and Kristensen (2004) showed higher work-predictability (i.e. being informed on future events at work) to significantly predict lower absence rates in men but not in women.

The abovementioned results provide evidence that the psychosocial work environment influences sickness absence partly differently in both sexes.

Indirect gender effects: (Gendered) person-related factors

As said before, biological sex and gender contribute to men and women 'choosing' different daily lives with their own health-relevant characteristics. Both factors determine also the development of sex differences in person-related (somatic,

physiological, cognitive, behavioral) characteristics that are relevant for health and sickness absence (Figure 1). Some person-related factors – interacting with sex/gender and certain job characteristics – were already mentioned in previous sections. This section will discuss some relevant person-related factors in more detail.

The most robust sex difference in coping is social support seeking, which women more frequently than men use (Taylor et al., 2000). Bellman et al. (2003) found social support to affect work stress in both sexes, but differently for both sexes for the same outcome variable. Men and women differed in their use of social support as a moderator of stress, and in the forms of social support they used.

Not only receiving social support seems to play a role in absenteeism, so does providing it. Väänänen et al. (2005) showed that, among women, giving more support than receiving in intimate relationships was related to lower levels of sickness absence. For men, however, receiving more support than giving predicted fewer absences. The authors suggest that among women the feeling of being a provider of support in intimate relationships, even if it is not reciprocated, may form a basis for one's medically assessed well-being. However, among men the perception of receiving support and aid from close persons may act as a resource in health maintenance. Although the extent to which (perceived) lack of social support seeking as a 'female' way of coping within a work setting might contribute to sickness absence is still unknown, this social support perspective seems very promising in explaining gender differences in sickness absence, and should be further investigated.

Another coping perspective on sex differences in sickness absence concerns avoidance and withdrawal. Considering that absenteeism not only reflects morbidity but also decision behavior, several authors concluded that absenteeism could be labeled withdrawal reactions (i.e. avoidance behavior in terms of coping), particularly in reaction to perceived inequity (Geurts et al., 1999). Assuming that women more frequently than men experience inequity (see above), and also more often avoid (repeated) confrontations implying conflicts or quarrels (e.g. Taylor et al., 2000), sickness absence might be the more 'feminine' way of coping with work conflicts. Unfortunately, as far as we know, no data on this issue are available yet.

Another person-related factor relevant for sickness absence from a gender perspective is work attitude, someone's attitude towards work including one's work motivation and -satisfaction, commitment with the organization, and the value (s)he attaches to work. Especially work satisfaction has repeatedly been studied. In a large, representative sample of nurses ($N = 3500$), Petterson, Arnetz, and Arnetz (1995) found twice as many sick days among those who were dissatisfied than among those who were satisfied with their jobs (mostly the women!). Lease (1998) found women compared with men to report similar work satisfaction and -commitment, despite their generally earning less money.

Furthermore, the influence of, especially women's attitudes toward the private life domain could be questioned (non-work attitudes). Maybe, women, who might still feel the option of withdrawing from work and being active in other life domains, use lower thresholds for absenteeism in case of job dissatisfaction. Bekker et al. (2005) however did not find empirical support for this assumption.

Discussion and conclusions

In the present study, we examined sex differences in sickness absence as a complex phenomenon involving actual as well as perceived health, illness, and social

behavior. To handle this complexity, we used an adapted version of the Multi-Facet Gender and Health Model, describing the interactions between sex, gender, and several moderating and mediating factor sets, specifically gender bias in statistics and treatment, gender-related daily life factors, and gendered person-related factors.

Although women compared to men are repeatedly portrayed as more frequently absent at work, this is not the case in all countries, neither in all age – or professional groups, and it seems restricted to short-term absence. In countries and age-groups where women's sickness absence rates exceed those of men, this may be due to pregnancy- and menstruation-related health problems; women's perception of inequity at work; the fact that women often experience high (emotional) work demands together with few possibilities to take decisions; too little support (and/or a perceived lack of opportunities for seeking social support); women's tendency to show preventive health behavior (i.e. taking a sick leave in order to prevent the worsening of complaints); being employed in female minority professions; relatively low thresholds for taking sick leave due to, e.g. the organizational culture; and to a tendency to cope by avoidance and/or passive behavior. It would have been interesting to be able to determine to what degree these factors are operative, but unfortunately generalizing findings to organizations and work places in general and/or to other countries is not possible. Furthermore, higher sickness absence rates of women compared with men seem hardly due to health problems resulting from combining a job with caring for children (multiple roles – double burden) – although selection effects cannot be ruled out here (healthy workers, or combiners effect), but gender-specific work attitudes, e.g. the option of not working (present in some countries in some social groups) might play a role. It is not plausible that the overrepresentation of women in the health care sector explains any general gender differences in sickness absence.

Having reviewed many studies, we feel a need to make some critical remarks and to offer some recommendations for future research. First, being aware of the huge variety in relevant factors across cultures, countries, organisations, occupational groups, and individuals we think that it hardly makes sense to aim for developing general statements regarding sex differences in absenteeism without putting them into context. Before many of the reported findings can be really trusted they should be replicated at least once, and also cross-culturally. But also, the risk of stereotyping is too obvious.

Secondly, although we acknowledge the importance of (reducing) long-term sickness absence for organisations, we think it is a very complicated outcome variable in health research, due to its extreme skewness. Only a small minority of the employees' population is long-term sickness-absent which may predominantly be due to specific characteristics of the type of long-term (chronic) sickness involved, thus to other than primarily work- or organisation-related factors. From an organisational perspective, it might therefore be more promising to investigate what specific, gender-related, organizational factors are related to short-term sickness absence.

Finally, some explanatory factors categorized within the Multi-Facet Gender and Health Model appeared, until today, not been thoroughly studied. Taking a closer look upon the, possibly gendered, content of various factors might help gaining a deeper insight into the role of gender and its relationship with sickness absence. For example, when studying 'working hours' it might be interesting to find out if both sexes put in as much effort in those hours. Second, for future sickness absence

research we particularly recommend further investigating sex differences in (somatic) health problems; effects of gender-bias in diagnostics and treatment; and the interaction between gender, coping (e.g. social support seeking, avoidance of assertiveness), availability of social and career support at work, and specific stressors such as lack of career prospects, sexual intimidation, high emotional demands.

Note

1. For instance, Mastekaa (2000) based on data from the National Insurance Administration (1998) in Norway reported that the number of sick leave days compensated under the Norwegian health insurance system per employee per year is 1.65 as high for women as for men. Also, in international studies on, respectively, 10 European countries and the US (Bliksvår & Helliesen, 1997) and 8 European countries and Canada (Barmby, Ercolani, & Treble, 2000) higher rates of female sickness absence were found except in Luxembourg and Spain where, interestingly, women had the lowest employment rates of the countries under study as well.

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