

# The gender difference in sickness absence: Do managers evaluate men and women differently with regard to the appropriateness of sickness absence?

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### **Abstract**

*Aims:* Women have much higher rates of sickness absence than men, but the causes of the difference are not well understood. This study examines whether managers have more lenient attitudes toward women's than toward men's absence, as this might contribute to higher rates of sickness absence among women. Differences between managers and other employees are also assessed. *Methods:* Vignettes were used to measure attitudes toward the legitimacy of sickness absence. The vignettes consisted of brief case descriptions of individuals considering asking their physicians for sick leave, with information about the medical condition (mainly taken from the descriptions in ICPC-2), occupation and gender. Respondents judged how appropriate sickness absence was in each case. Quota sampling was used, and the effective sample size was 899 managers and 1396 other employees, and each respondent evaluated either four or six vignettes. Generalised ordinal logistic regression was used. *Results:* The gender of the vignette person had no effect on the managers' evaluations of the appropriateness of sickness absence. Irrespective of the gender of the vignette person, however, managers were generally more restrictive than non-managers. *Conclusions:* Different attitudes on the part of managers toward sickness absence in men and women do not seem to contribute to gender differences in sickness absence, but managers are generally more restrictive than are non-managerial employees.

**Key words:** Sickness absence, gender, attitudes, norms, managers, vignettes

**Word count:** 3000 (without headings and location notes)

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## **Introduction**

Around the turn of the century, three European countries stood out with very high levels of sickness absence, viz. the Netherlands, Norway and Sweden [1]. Since then, sickness absence in the Netherlands and Sweden has declined markedly, while Norwegian levels have remained high. Sweden and Norway, in particular, are also characterised by a much higher level of sickness absence among women than among men, but similar, although often smaller gender differences are found in nearly all countries for which data are available, both European [1] and North American [2]. There is some evidence that the gender difference is small when there are relatively few women in the labour force [3], but there are also examples of countries with relatively low female labour force participation and a large gap in sickness absence, such as Hungary and Ireland [1].

Pregnancies contribute to higher sickness absence among women, but can only explain a minor part of the difference between women and men [4]. Most studies also suggest that family related responsibilities can at best account for a minor part of the gender difference [5-7], and the same applies to occupation- and work-related factors [1,8-10].

Less is known about the importance of attitudinal and cultural factors, such as a possibly greater social acceptance of women's than men's sickness absence [11]. A small number of empirical studies have compared men's and women's attitudes, largely indicating that women are not more inclined than men to accept absence taking in various situations [12-14]. A couple of studies have also addressed the related issue of whether the *social norms* with regard to absence taking are gendered and possibly less restrictive for women

than for men, indicating that this is not the case, but the evidence is too limited to draw any conclusions [13,14]. Also, these studies have been concerned with the norms found in the general population or among ordinary employees, and have not considered the possibility that groups with more influence on absence taking may feel differently about men's and women's absence, possibly being more lenient with regard to the latter. Although there is a literature on the importance of gender GP – patient interaction in general [15], there is almost no evidence that focuses more directly on sickness certification [16,17]. Managers is an equally underresearched group, and the one we focus on in this article.

Two conditions must be satisfied if gendered norms on the part of managers are to explain (part of) the gender difference in sickness absence. First, the managers must actually subscribe to different norms with regard to men's and women's absence, more specifically being less restrictive with regard to women than with regard to men (cf. the concept of 'benevolent sexism') [18]. Second, these norms must somehow be communicated to the employees in question, or they may at least be perceived by the employees. Only the first of these conditions is examined in this study. Thus, documentation of different norms with regard to male and female absence does not necessarily mean that the employees' behaviour are actually affected. Finding that managers have the same feelings about male and female absence, however, supports rejection of the gendered managerial norms explanation.

In this article, we address the issue of gender bias in evaluations of the appropriateness of sick leave by means of vignette data from about 900 individuals in managerial jobs. Further, we examine whether there is more or less gender bias among managers than among other employees using similar data from about 1400 non-managerial employees. To evaluate the general sensitivity of our measurement approach, we also

compare the overall (not gender specific) restrictiveness of managers and non-managerial employees. Each respondent was given four to six vignettes, i.e., brief case descriptions, and was then asked to judge whether sickness absence was reasonable in each case. We examine whether the gender mentioned in the particular vignette (as indicated by a female or a male first name) makes a difference to the managers' judgements and whether managers differ from other employees in this respect.

## **Methods**

We combine data from two vignette surveys, both carried out with the assistance of the market research firm Kantar TNS. In the first survey a sample was drawn from a general-purpose, web-based panel managed by this firm. The panel consists of approximately 45,000 participants over the age of 15 who have been recruited to join the panel after participating in surveys conducted by the firm. Panel participants are free to accept or decline any invitation to participate in a survey; consent is given by filling in and submitting a particular survey. The study questionnaire was sent by email to a gender stratified sample of panel participants registered as employees. Data were obtained for quotas of 900 female and 900 male respondents, at a response rate of 53%. We excluded 84 self-employed individuals, resulting in an N of 1716. Although invitations were sent to a probability sample of panel participants, panel membership is based on self-selection. Thus, we do not have a probability sample of the population of Norwegian employees.

410 of the respondents had managerial jobs. To provide a larger and more reliable sample of managers, a second vignette survey was carried out. A probability sample was drawn from a national register of Norwegian establishments (including administrative units in the public sector) maintained by Kantar TNS, and the establishments were invited to

participate. The invitations were sent by email, and the recipients were informed that participation was voluntary. Consent was given by filling in and returning the web-based questionnaire. The data collection was terminated when the target number of establishments (N=576) had been recruited. No attempts were made to follow up establishments that did not respond. The resulting sample therefore should be regarded as based on self-selection by establishments and not as a probability sample.

Although the participating establishments were asked to let either the top manager or at least a lower level manager answer the questions, 78 establishments let another employee do this. These 78 respondents were added to the general employee sample. 32 respondents in the establishment sample were excluded because of missing data on occupational position. With these adjustments, and when also excluding a few respondents with missing data on individual variables, the number of managers in the analyses is 899, while the number of ordinary employees is 1396.

Survey vignettes are descriptions of hypothetical scenarios, resembling real-life decision-making situations, where the respondents are asked to make some form of judgement [19,20]. The main vignette characteristic in our study is the employee's gender. To make sure our findings are not limited to a small number of scenarios, we included a broad range of 48 different occupations (90 in the employee survey) and 24 different medical conditions in the vignettes (28 in the employee survey). The descriptions of medical conditions are based on diagnostic descriptions in the ICPC manual, with emphasis on diagnoses frequently used in sick leave certification. We included some vignettes with examples of work- and family-related socio-psychological problems (i.e. workplace conflicts, care responsibility for family members) instead of medical diagnoses. We constructed vignettes with all combinations of gender, occupation and medical condition, and each

respondent was presented with a random sample of six (the employee survey) or four (the establishment survey) vignettes. Thus, the statistical independence of the vignette characteristics with each other and with respondent characteristics was assured. The respondents were asked to judge whether sick leave was “completely unreasonable” (1), “fairly unreasonable” (2), “fairly reasonable” (3) or “completely reasonable” (4); “don’t know” was also a possible response. Detailed information on the vignettes and lists of occupations and medical conditions are provided as online supplementary material.

In the employee survey, the respondent was asked directly whether he or she had a managerial job. In the establishment survey, respondents were asked about their job titles and these were coded by the researchers. We also distinguish between higher and lower level managers. In the employee survey, this was done on the basis of a follow-up question where the respondents were asked to differentiate between (1) top executive or managing director, (2) other type of director, (3) middle level manager, and (4) other type of managerial job. (1) and (2) were coded as higher level and (3) and (4) as lower level.

We applied generalised ordinal logistic regression [21]. This implies that the assumption of equal coefficients across the cut points on the dependent variable (the proportional odds assumption) is tested for each explanatory variable, and when rejected, the coefficients are allowed to differ. Since the respondent judged several vignettes, we employed robust standard errors that take clustering into account [22]. Information on the statistical power of the estimated gender effect is provided in the online supplementary material.

[Table 1 about here]

## **Results**

Table 1 compares the study sample with the population of employed individuals in Norway

(separate information on managers and non-managers in the population is not available). Managers are older than other employees, but even non-managers in the sample are on average older than the population. Similarly, managers tend to have more education than non-managers, but people with relatively high education are generally overrepresented in the sample. Information on industry is only available in the establishment survey. The sample distribution is fairly similar to the population, but managers in Health and social services and Other service activities are over-represented, and managers in Trade etc. are under-represented.

[Figure 1 about here]

The distribution of the dependent variable is shown in Figure 1. Although 'fairly reasonable' is the most common response, managers are more likely than non-managers to regard sick leave as 'completely unreasonable' and less likely to regard it as 'completely reasonable'. The gender of the vignette person appears to have little impact for managers and non-managers alike.

[Table 2 about here]

Results from the regression of absence attitudes on vignette gender and respondent gender are reported in Table 2. None of the odds ratios is significantly different from one. We also tested the proportional odds assumption and found that it could not be rejected ( $\chi^2=3.10$ ;  $df=4$ ;  $p=.54$ ). There was no statistical interaction between vignette gender and respondent gender ( $\chi^2=.51$ ;  $df=1$ ;  $p=.47$ ). Thus, the simple model in Table 2 was supported.

[Table 3 about here]

In Table 3 we compare managers and non-managers. In the analysis of non-managers, the proportional odds assumption was rejected for respondent gender ( $p=.002$ ), and Table 3 therefore provides separate odds ratios for each cut point on the four-category



dependent variable. To make the analyses as comparable as possible, the same model was estimated for managers. The odds ratios for vignette gender are not significant and very close to one in both groups. Among non-managers, there is a significant effect of respondent gender, but only for the lowest cut point, that is, for the dichotomisation between 'entirely unreasonable' on the one hand, and 'somewhat unreasonable', 'somewhat reasonable' and 'entirely reasonable' on the other. The odds ratio of 1.36 suggest that women are more likely than men to avoid the most restrictive category. However, there is no clear gender difference in the overall level of leniency versus restrictiveness, as the midpoint cut-off (3-4 versus 1-2) and the cut-off between the most lenient category on the one hand and the three remaining categories on the other yield non-significant odds ratios. The pattern of the odds ratios is similar for managers, but in this case, none of them is significantly different from one.

Table 3 also includes tests of whether each odds ratio is identical for managers and non-managers and for higher level managers and non-managers. The null hypothesis of identical odds ratios could not be rejected in any case. This result makes it appropriate to pool the manager and non-manager samples in a common analysis. This is shown in Table 4. The odds ratios for vignette and respondent gender are as expected from Table 3. The proportional odds assumption was rejected for respondent gender ( $p < .001$ ) and for the manager variable ( $p < .001$ ). In analysis A, the odds ratios for the manager variable are all well below one, suggesting that managers are in general considerably more restrictive than non-managers, and the difference is particularly large for the most restrictive response ('completely unreasonable').

[Table 4 about here]

Table 4 includes two additional analyses. Analysis B shows that the main pattern is

even more clear when lower level managers are excluded; thus, higher level managers are more restrictive than both non-managers and lower level managers. Analysis C extends Analysis A by controlling for level of education and age. The difference between managers and non-managers cannot be explained as an outcome of these variables.

## **Discussion**

In a previous article, we found that respondents were equally lenient or restrictive with regard to sickness absence irrespective of whether the person described in a vignette was female or male [15]. Similar results based on direct survey questions rather than case descriptions were reported in a study of employees in social security offices [14]. The results above show that this conclusion holds even for a broad sample of managers in Norwegian establishments.

Although managers and non-managers were similar in seemingly ignoring gender when evaluating the acceptability of sickness absence, a clear difference was found in their overall level of restrictiveness (i.e., with regard to both men and women). Moreover, this was particularly the case for higher level managers, indicating a dose-response like relationship.

An important strength of our study is the use of an indirect measurement procedure such as the vignette approach. The most direct and obvious way of assessing gender bias in absence norms would be to ask people directly whether they think men and women should be treated equally or not when it comes to accepting absence from work. Given the generally strong emphasis on gender equality in modern Western societies, respondents might feel a pressure to state that men and women should be treated equally, even in an anonymous survey [23,24]. Moreover, stereotypes may be unconscious or *implicit* and thus

impact behaviour even when people think that their behaviour is entirely gender neutral.

Indirect measurement procedures are therefore often preferable [25].

The fact that clear overall differences in restrictiveness were found between managers and non-managers (and particularly between higher-level managers and non-managers) supports the assumption that our vignette approach is a reasonably sensitive instrument for measuring group differences. Thus, it adds to our confidence that the lack of impact of the gender of the vignette person is a true reflection of the social norms and not a methodological artefact.

Although we believe that a vignette approach is clearly preferable to more direct measures of bias in judgements of the appropriateness of sickness absence, there are potential problems. One issue is whether the presentation of a female or male first name is a sufficiently strong cue to trigger gender biases. It is conceivable that gender may have a stronger impact in actual social encounters, although it might also be opposite, as a person's gender would then have to compete with numerous other characteristics (age, physical attractiveness, way of talking, etc.). A related issue is the amount of detail available on the person's medical situation. It is possible that the salience of gender declines with the amount of available medical and other information.

Another important limitation of our research is the use of self-selected samples. Individuals and establishments volunteering to participate in research, and in this research project in particular, may differ systematically in gender-related attitudes from those who do not (although we do not see any obvious reason for this to be the case).

An obvious interpretation of the findings is that managers' sick leave evaluations are not influenced by gender stereotypes. Another possible interpretation is that gender stereotypes do affect sick leave evaluations, but that the direction of the effect may differ

between persons or between situations. For example, traditional female stereotypes of being weak and dependent [26] may legitimate sickness absence, but they may also contribute to a belief that women are more likely to ask for sick leave even when not 'really' ill and that they are thus less deserving than men.

We are not aware of previous research comparing how managers and other employees evaluate the appropriateness of sick leave. However, our findings are consistent with the suggestion that perceptions of absenteeism are influenced by the different perspectives of managers and non-managers [27]. Managers may think primarily in terms of how they believe others (their employees) should be treated whereas other employees think in terms of how they think they themselves (or others like them) should be treated. Further research are needed to assess the validity of this interpretation.

We were not able to find previous studies of gender bias among managerial employees with regard to their sickness absence evaluations. Surprisingly, the issue of gender bias has also received very little attention in studies of GPs [16,17], although a few studies of related issues have included analyses that show whether men or women are more likely to receive sickness certifications or certifications of various lengths [28,29,30]. A Swedish study found women to have higher probability of being certified when seeing a GP [28]. A Dutch study found longer absence durations among women than men [29], while opposite findings are reported in English and Norwegian studies [16,17,30]. However, a limitation of these studies is that the gender differences found may be due to other characteristics of the patient (e.g., the severity of the health problem) or of the GP – patient interaction [16]. This should be less of a problem with the vignette approach as the situations depicted vary only with respect to patient gender, occupation and diagnostic information, and all these factors are by design independent of one another.

The literature on norms and attitudes as possible influences on gender differences in sickness absence is very small. This holds for employees and even more for other important stakeholders such as managers and GPs. Further research is essential before clear conclusions can be drawn. The potential of the vignette method should also be explored further, in particular the degree to which the findings are sensitive to the amount of detail given about the person as well as about the situation depicted in the vignette.

### **Declaration of Conflicting Interests**

The authors have declared that no competing interests exist.

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Table 1. The distribution of age, level of education and industry in the study sample and in the population of employed individuals

	Study sample		Population	
	Managers	Other employees		
Age	15-19	0.0	0.5	4.2
	20-24	1.0	5.4	8.2
	25-39	15.0	32.3	32.3
	40-54	42.2	24.8	34.1
	55-66	40.7	36.9	18.5
	67-74	1.1	0.1	2.7
	Sum	100.0	100.0	100.0
	N	898	1 395	2 625 554
Level of education	Lower secondary or less	2.3	3.1	18.8
	Upper secondary	32.1	46.8	38.2
	Higher education, lower level	38.6	30.7	26.6
	Higher education, higher level	26.9	19.3	11.1
	Unknown			5.3
	Sum	99.9	99.9	100.0
	N	899	1 396	2 625 556
Industry (NACE codes in parentheses)	Agriculture, forestry and fishing (01-03)	1.4		2.2
	Other manufacturing industries (05-43)	16.1		19.4
	Trade, transport, communication, financial activities, etc. (45-82)	31.0		38.4
	Public administration (84)	6.3		6.4
	Education (85)	7.5		8.2
	Health and social services (86-88)	28.7		20.8
	Other service activities (90-99)	9.0		3.9
	Unspecified (00)			0.6
	Sum	100.0		99.9
	N	494		2 625 547

Table 2. Ordinal logistic regression of lenient absence attitudes on vignette gender and respondent gender. Managers only. Odds ratios with 95 percent confidence intervals.

	OR	CI
Vignette gender	1.039	0.939 ; 1.150
Respondent gender	1.000	0.849 ; 1.179
N of respondents		899
N of vignettes		3805

p-values: \*\*\* p<.001; \*\* p<.01; \* p<.05

Table 3. Generalised ordinal logistic regression of lenient absence attitudes on vignette and respondent gender. Separate analyses of non-managers, all managers and higher level managers. Odds ratios with 95 percent confidence intervals.

	A: Non-managers		B: All managers		C: Higher level managers		Test of group differences			
	OR	CI	OR	CI	OR	CI	All managers v. non-managers		Higher level man. v. non-man.	
							z	p-value	z	p-value
Vignette gender	1.026	0.948 ; 1.111	1.039	0.939 ; 1.150	0.974	0.833 ; 1.138	0.189	0.850	0.599	0.549
Respondent gender										
Cat. 2-4 v. 1	1.363 **	1.081 ; 1.718	1.179	0.912 ; 1.525	1.416	0.966 ; 2.076	0.808	0.419	0.167	0.867
Cat. 3-4 v. 1-2	0.994	0.867 ; 1.139	1.025	0.863 ; 1.219	1.120	0.860 ; 1.460	0.290	0.772	0.761	0.447
Cat. 4 v. 1-3	0.865	0.734 ; 1.018	0.919	0.740 ; 1.140	0.812	0.578 ; 1.140	0.427	0.670	0.333	0.739
N of respondents		1396		899		383				
N of vignettes		6406		3805		1495				

p-values: \*\*\* p<.001; \*\* p<.01; \* p<.05

Table 4. Generalised ordinal logistic regression of lenient absence attitudes on vignette and respondent gender and managerial job. Analysis A includes non-managers and all managers, Analysis B omits lower level managers. Analysis C is the same as Analysis A, except for control for level of education and age. Odds ratios with 95 percent confidence intervals.

	A: Non-managers and all managers		B: Non-managers and higher level managers		C: Analysis A with control for education and age	
	OR	CI	OR	CI	OR	CI
Vignette gender	1.031	0.969 ; 1.098	1.016	0.946 ; 1.091	1.031	0.968 ; 1.098
Respondent gender						
Cat. 2-4 v. 1	1.267 **	1.066 ; 1.507	1.369 **	1.124 ; 1.669	1.381 ***	1.158 ; 1.647
Cat. 3-4 v. 1-2	1.004	0.902 ; 1.118	1.020	0.904 ; 1.152	1.105	0.985 ; 1.239
Cat. 4 v. 1-3	0.883	0.775 ; 1.007	0.857 *	0.739 ; 0.993	0.973	0.849 ; 1.116
Manager						
Cat. 2-4 v. 1	0.615 ***	0.517 ; 0.732	0.489 ***	0.392 ; 0.610	0.637 ***	0.534 ; 0.760
Cat. 3-4 v. 1-2	0.766 ***	0.686 ; 0.856	0.687 ***	0.592 ; 0.797	0.801 ***	0.714 ; 0.898
Cat. 4 v. 1-3	0.784 ***	0.684 ; 0.898	0.735 **	0.609 ; 0.888	0.819 **	0.712 ; 0.942
N of respondents		2295		1779		2293
N of vignettes		10211		7901		10203

Note: In analysis C, education is used as a categorical variable (five categories, see Table 1) and age (in single years) as a continuous variable. p-values: \*\*\* p<.001; \*\* p<.01; \* p<.05.

Figure 1. The distribution of the evaluations of the appropriateness of sick leave by the vignette person's gender for managers and non-managers.

