

# Correspondence in Stakeholder Assessment of Health, Work Capacity and Sick Leave in Workers with Comorbid Subjective Health Complaints? A Video Vignette Study

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**Abstract** *Purpose* The purpose of this study is to test if there is correspondence in stakeholders' assessments of health, work capacity and sickness certification in four workers with comorbid subjective health complaints based on video vignettes. *Methods* A cross sectional survey among stakeholders (N = 514) in Norway in 2009/2010. Logistic regression and multinomial logistic regression was used to obtain the estimated probability of stakeholders choosing 100 % sick leave, partial sick leave or work and the estimation of odds ratio of stakeholder assessment compared to the other stakeholders for the individual worker. *Results* The supervisors were less likely to assess poor health and reduced work capacity, and more likely to suggest partial sick leave and full time work compared to the GPs for worker 1. The public was less likely to assess

comorbidity and reduced work capacity, and 6 and 12 times more likely to suggest partial sick leave and full time work compared to the GPs for worker 1. Stakeholders generally agreed in their assessments of workers 2 and 3. The public was more likely to assess poor health, comorbidity and reduced work capacity, and the supervisors more likely to assess comorbidity and reduced work capacity, compared to the GPs for worker 4. Compared to the GPs, all other stakeholders were less likely to suggest full time work for this worker. *Conclusions* Our results seem to suggest that stakeholders have divergent assessments of complaints, health, work capacity, and sickness certification in workers with comorbid subjective health complaints.

**Keywords** Sick leave · Work capacity evaluation · Comorbidity · General practitioners · Return to work

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## Introduction

Management of sickness absence and work disability is complex and influenced by social, organizational, jurisdictional, medical and individual aspects [1]. It remains high on the agenda of European governments. The Norwegian social security system provides daily cash benefits with 100 % of pensionable income, up to 6G (in 2015: 1G equals NOK 90 068). All employed workers with reduced ability to work due to a medical symptoms or disease diagnosis are entitled to sickness benefits. Musculoskeletal and mental symptom and disease diagnoses were the most prevalent reasons (60 %) for sickness absence in Norway in 2014. Employers pay cash benefits for the first 16 days of sickness absence, while the National social insurance system (Norwegian Labor and Welfare Administration

(NAV) covers the wage loss from the 17th day up to a maximum of 1 year. After 8 weeks of sickness absence, it is considered long-term sickness absence (LTSA). After 52 weeks, work assessment allowance cover the worker for up to 2 years and eventually, permanent disability pension. Self-certification, in the case of sickness, may be used within the first 3–8 days with a total of 24 days during a 12-month period if the person works in an inclusive workplace (IW) enterprise. The IW enterprises have signed the Cooperation Agreement for a More Inclusive Workplace aiming to increase participation in working life by systematic cooperation to satisfy the goals of a more inclusive workplace. In Norway, public spending on sickness and disability makes up 4.8 % of total gross domestic product (GDP), compared to an Organisation for Economic Co-operation and Development (OECD) average of 1.9 % [2].

Efforts to reduce sickness absence over the past 20 years have not been very successful, and several reasons are put forward. Among these are the collaboration difficulties between stakeholders. In longer episodes of sickness absence several stakeholders are involved [3, 4]. Each stakeholder operates within a specific set of economic, social, and legislative contexts [5] and have divergent sets of assumptions or paradigms [6] that guide their work, management and decision making. The physician's work is within the paradigm of medicine where their role is to restore health, optimize capabilities and minimize the negative effects of injury [7]. They are trained to assess and treat disease and symptoms [8]. The insurance case manager is guided by legislation or company criteria for incapacity assessment [5]. Supervisors and employers are guided by legislations but also economic profit or incitement. Hence, a worker with recurrent and prolonged sickness absence may be viewed as dysfunctional [7].

As part of a central national and governmental objective, partial sick leave or sickness presenteeism with work adjustment opportunities is regarded as a better option than full sick leave in Norway. Personal experiences may influence the sick listed workers views of working while ill. The certifying general practitioner (GP), act from a position of negotiating between personal views [9] and legislations [10]. This may result in disparate interpretations and actions in assessment of health, work capacity and the workers' need for, or entitlement to sickness absence [5]. Due to the complexity of work capacity, good levels of communication and collaboration have been highlighted to ensure successful management of the sick listed worker [4]. There is a need for better understanding about when and why stakeholders differ in their assessments [7] because establishing common ground, sharing commitment and collaboration is necessary for successful RTW [11, 12]. Divergent understanding may cause or be an expression of

hampered communication and collaboration [3]. A study by Haldorsen et al. [13] identified significant differences between general practitioners, medical consultants, insurance clerks and representatives from the general public related to assessment of disease, illness and sickness certification. The most significant differences were observed for decisions on sickness certification [13]. Deeper understanding of tensions and differences among stakeholders may be an avenue for facilitating collaboration [7] and ensure that the employee with health complaints and the risk for LTSA is at the centre of treatment and care.

We assume that stakeholders are guided by different paradigms and criteria. The hypothesis is that this difference in understanding will lead to divergent assessments of the workers complaints, health, work capacity and sickness certification. Workers with comorbid subjective health complaints, consulting their GP, were chosen because research has suggested this subgroup to accounts for up to half of all LTSA. This group is particularly challenging for health care providers and insurance officials because of the lack of objective findings. The aim of this study is to explore if there is correspondence in stakeholders' assessments of health, work capacity and sickness certification in a Norwegian setting.

## Methods

We chose an explorative approach with a self-recruited sample in a cross sectional design. Video vignettes were used in order to ensure standardized stimuli to all participants, thereby increasing internal validity. Participants (N = 514) representing different stakeholders in LTSA management were recruited in a cross sectional survey in Norway in 2009/2010 to assess health, work capacity and sick leave based on video vignettes presenting workers with comorbid subjective health complaints. The stakeholders represented; general practitioners (GPs) (n = 120), supervisors (n = 107), the public, (n = 259), and the insurers, in this case representatives from The Norwegian Labor and Welfare Administration (NAV) (n = 28).

## Recruitment and Data Collection

All stakeholders were recruited through convenience sampling methods. The GPs were recruited through Continuous Medical Education (CME) courses approved by the Norwegian Medical Association and the supervisors and insurer officials were recruited through courses offered in LTSA and RTW management. The public were recruited through online ads on Google and Facebook, and through Twitter. During the recruitment period, researchers involved in the project were also interviewed in a local newspaper and on national radio.

## The Video Vignettes

The video vignettes were taped with actors that closely based their performances on authentic consultations in the general practice setting. The vignettes included a short introduction from the GP, presenting the workers' medical history, results from previous medical investigations, life situation and health complaints, followed by a consultation. The workers; the female short-time worker (worker 1), the offshore worker (worker 2), the self-employed worker (worker 3), and the kindergarten teacher (worker 4) all presented with comorbid subjective health complaints such as musculoskeletal pain, generalized fatigue, psychological and social problems (Table 1). Based on previous studies among Scandinavian GPs using nine vignettes [14, 15], we chose four of these. We did this to reduce the burden on the participants of watching nine video vignettes. The GPs, supervisors and the insurers watched all four video vignettes while the public were given the option to watch one, two, three or four video vignettes. After watching the vignettes, the participants were asked to answer a questionnaire.

## Questionnaires

All participants were first asked to fill out a short demographic questionnaire. Then, a questionnaire related to each video vignette asked the participants to list the three main complaints based on the consultation between the worker and the GP. As opposed to the other stakeholders, GPs were asked to list up to three diagnoses using the most predominant diagnostic taxonomy in European primary care, the *International Classification of Primary care, Second Edition* (ICPC-2) ICPC-2 [16] (for details see Maeland et al. [15]). The ICPC-2 is organized into organ chapters, e.g. Musculoskeletal, Psychological, Neurological, General and unspecified, Cardiovascular, Gastrointestinal and Skin. As supervisors, the public, and the insurance participants did not use ICPC-2, but listed reasons for complaint in their own terminology, we later recoded these terms according to the ICPC-2 organ chapters for comparability reasons. Some examples of such recoding would be recoding "chronic musculoskeletal pain and fatigue" as "Musculoskeletal", "hypochondriac" as "Psychological", "doesn't want to work" or "lazy" as "Social problems", and "pain" as "General and unspecified". A comorbidity variable was computed if participants coded the worker's main, secondary and tertiary health complaint as belonging to different ICPC-2 organ chapters. We also recoded some variables to create consistency. For example if a participant wrote: "bad blood" we first recoded into ICPC-2 organ chapter; "Blood, blood forming organs and immune

mechanisms" and then into "General and unspecified". In addition to listing health problems, we asked the participants to rate the worker's health on a 5 point Likert scale from "Very good" to "Very poor", and the worker's capacity to work on a 5 point Likert scale from "Very reduced" to "Insignificantly reduced". Based on assessment of health and work capacity, participants could decide that the worker presented in the video vignette should remain in work, or they could grant 100 % sick leave, partial sick leave (20–80 % off sick from work), medical and vocational rehabilitation allowances, and disability pension.

In the Norwegian welfare system combinations of these categories are possible. Partial sick leave or partial disability pension may be combined with part-time work. The work and sick leave variable were grouped into three for statistical analyses: (0) "Work" (not in need of/entitled to sick leave); (1) "Partial sick leave" (in need of/entitled to sick leave in the range 20–80 % of full time absence from work); and (2) "100 % sick leave" (reference category in the analyses).

## Statistical Analyses

We used frequencies and percentages for descriptive analysis. Chi square tests ( $\chi^2$ ) were used to analyse differences in socio demographic variables between the stakeholders and correlations between assessment of health and work ability. Logistic regression was used to test relationships between the dichotomous categorical dependent variables (health, work capacity and comorbidity) and the categorical explanatory variable, stakeholders. Multinomial logistic regression provides an effective and reliable way to obtain the estimated probability of stakeholders choosing 100 % sick leave, partial sick leave or work and the estimated odds of stakeholder assessment compared to the other stakeholders for the individual worker. Good health, not reduced work capacity, no comorbidity and 100 % sick leave were set as references in the models. We reported unadjusted odds ratios (ORs) with 95 % confidence intervals. GPs represent the "gold standard" for assessing these aspects, and we present GPs as a reference group in Table 3. However, we also explored all stakeholders as a reference group in different models and statistical significant results are presented in text in the results section. A Pearson product-moment correlation coefficient was computed to assess the relationship between assessment of health and work capacity. Pearson Chi Square was used to assess if gender or age ( $\geq 50$  years) could explain the crude ORs. The PASW software package version 18.0 (2010 SPSS Inc.) for Windows was used for statistical analyses. Statistical significance was set as  $p < 0.05$ .

**Table 1** Description of the workers presented in the video vignettes, gender, age, demography, complaints and self-assessment of disability

Worker	Gender, age	Demography	1st complaint mentioned in consultation/principal complaint	Secondary complaints	Self-assessment of disability
1	♀ 25	Single, no children Divorced parents, no contact with her father, adverse family history Interrupted secondary education Currently in rehabilitation program Several short time jobs and sick leave spells	General pain in the neck, the back and in arms Intense pain 24 h per day, 7 days a week	Respiratory complaints, no objective findings of asthma or other known somatic disease. Anxiety and depression periodically treated with antidepressants	Expresses hope to achieve ability to work, but need substantial improvement in health conditions first
2	♂ 40	Married, two children Working off shore on oil platform as a mechanic – 2 weeks on, 4 weeks off work Several shorter periods of sick leave and two long spells (1 year each)	Back and neck pain	Sleeping disturbances due to pain Irritable bowel syndrome, skin eczema	The work is physically hard and provokes pain He does not see himself in this job until retirement, but the salary and long periods off work make him keeping the job
3	♂ 37	Married, unknown number of children Previously working off shore, but started as self-employed in construction	General intense fatigue	No other complaints but have read about CFS which he finds fits his problems Economically burdens due to poor benefit coverage as self-employed	No work capacity
4	♀ 37	No information on marital status or children Working in a kindergarten Previous 4 month sick leave for same complaints was followed by no symptoms for one and a half year	Periodically numbness, staring like a toothache, followed by headache and a sensation of anesthesia on the right side of the body; things slips out of her hand. Extensive medical examination has not proved any cause of the symptoms	No other complaints	Difficult to work with these complaints, unsure about sick leave

## Ethics

The Regional Committee approved the study for Medical and Health Research Ethics, Western Norway (REC West 245.08).

## Results

The study population constituted 514 participants, 38 % male, and the majority were between 41 and 50 years. Table 2 shows the demographic characteristics of the study population and there were statistical significant differences between stakeholders for gender, age and education. The majority (63 %) of GPs were Male. The majority (69 %) of

the supervisors had 1–4 years of higher education. The public was the youngest group (24 % were between 20–30 years) and had the lowest level of education.

There were statistically significant differences between stakeholders in labels describing health problems for all four workers ( $p < 0.001$ ). Still, the most common labels within and across all stakeholder groups, were psychological labels (P) for worker 1, musculoskeletal labels (L) for worker 2, general and unspecified labels (A) for worker 3, and neurological labels (N) for worker 4. Overall, there was a positive correlation between assessing health as poor and work capacity as reduced for all four workers ( $p < 0.001$ ). Stratifying the analyses by stakeholder did not change this positive correlation.

**Table 2** Socio-demographic variables and differences between the stakeholders (N = 529)

	GPs (n = 120)	Supervisors (n = 107)	Public (n = 259)	Insurer (n = 28)
Gender, n (%)				
Men	76 (63.3)	29 (27.1)	83 (32.0)	10 (35.7)
Women	44 (36.7)	76 (71.0)	155 (59.8)	18 (64.3)
Education, n (%)				
Elementary school	–	–	16 (6.2)	–
High school	–	8 (7.5)	107 (41.3)	2 (7.1)
University college/University 1–4 years	–	74 (69.2)	80 (30.9)	7 (25.0)
University >4 years	120 (100)	23 (21.5)	38 (14.7)	19 (67.9)
Missing	–	2 (1.9)	18 (6.9)	–
Age, n (%)				
20–30	2 (1.7)	2 (1.9)	62 (23.9)	1 (3.6)
31–40	26 (21.7)	30 (28.0)	70 (27.0)	3 (10.7)
41–50	39 (32.5)	37 (34.6)	59 (22.8)	12 (42.9)
51–60	30 (25.0)	29 (27.1)	39 (15.1)	8 (28.6)
≥61	18 (15.0)	7 (6.5)	9 (3.5)	3 (10.7)
Missing	–	2 (1.9)	20 (7.7)	1 (3.6)

Chi-square for difference between stakeholders: *p* value <.001 for all demographic variables

For worker 1, the supervisors were less likely to assess poor health and reduced work capacity, and more likely to suggest partial sick leave and full time work compared to the GPs. The public was less likely to assess comorbidity and reduced work capacity, and 6 and 12 times more likely to suggest partial sick leave and full time work when compared to the GPs. There was no difference between the insurers and the GPs. There were no statistically significant differences between stakeholders assessed of health or suggested sick leave for worker 2. For worker 3, the insurers were more likely to assess poor health and comorbidity compared to the GPs. In addition, the supervisors and the public were more likely to assess comorbidity than the GPs. The public was more likely to suggest full time work, and the insurers suggested more partial sick leave than the GPs. For worker 4, the public was more likely to assess poor health, comorbidity and reduced work capacity, and the supervisors more likely to assess comorbidity and reduced work capacity, compared to the GPs. Compared to the GPs, all other stakeholders were less likely to suggest full time work for worker 4. See Table 3 for complete overview.

We also provided the assessment by the public compared to supervisors and the insurers, and the supervisors compared to the insurers. In two of the four workers (W) the public was more likely to assess reduced work capacity (W1: OR 2.1; 95 % CI 1.1–3.8, W2: OR 1.9; 95 % CI 1.1–3.2), and for all workers increased levels of comorbidity (W1: OR 2.1; 95 % CI 1.2–3.8, W2: OR 2.1; 1.1–3.7, W3: OR 2.5; 95 % CI 1.4–4.4, W4: OR 2.5; 95 % CI 1.1–5.8) compared to the supervisors. The public was

also less likely to suggest partial sick leave for all four workers (W1: OR 0.3; 95 % CI 0.2–0.6), (W2: OR 0.2; 95 % CI 0.1–0.6), (W3: OR 0.5; 95 % CI 0.3–0.9), (W4: OR 0.4; 95 % CI 0.2–0.9) and full time work for worker 1 (W1: OR 0.3; 95 % CI 0.2–0.6) compared to the supervisors. In other words, the public suggested more often 100 % sick leave compared to the supervisors. The public was less likely to suggest partial sick leave for worker 4 (OR 0.3; 95 % CI 0.1–0.8) and full time work for worker 1 (OR 0.2; 95 % CI 0.1–0.9) compared to the insurers.

## Discussion

### Principle Findings

Our main finding is that there seems to be a discrepancy between stakeholders about what are the most disabling complaints.

The GPs assessed one of the workers, presenting with general and unspecified, musculoskeletal, and psychological complaints, to have significantly poorer health and more reduced work capacity compared to the supervisors, the public and the insurers. The GPs also assessed this worker to be in need of full time sick leave, significantly more often than the other stakeholders.

For the worker given neurological labels, based on her presentation in the video vignette, we observed the opposite pattern. The public and the supervisors assessed the kindergarten teacher, who presented with periodic numbness, headache and a sensation of anesthesia on the right

**Table 3** Differences between stakeholders (N = 529)

Vignette	Stakeholders	Assessment																							
		Poor health						Comorbidity						Reduced work capacity						Suggestion					
		n	%	OR <sup>a</sup>	95 % CI	%	OR <sup>b</sup>	95 % CI	%	OR <sup>c</sup>	95 % CI	%	OR <sup>d</sup>	95 % CI	%	OR <sup>d</sup>	95 % CI	%	OR <sup>d</sup>	95 % CI					
W1	GPs	120	45	1		83	1		82	1		30	1		8	1									
	Supervisors	107	<b>33</b>	<b>0.6</b>	<b>[0.3–0.9]</b>	78	0.7	[0.4–1.5]	<b>67</b>	<b>0.4</b>	<b>[0.2–0.8]</b>	<b>43</b>	<b>0.6</b>	<b>[0.3–0.9]</b>	<b>14</b>	<b>2.6</b>	<b>[1.1–6.5]</b>								
	Public <sup>e</sup>	127	43	0.9	[0.5–1.4]	<b>63</b>	<b>0.4</b>	<b>[0.2–0.6]</b>	<b>66</b>	<b>0.4</b>	<b>[0.2–0.8]</b>	56	0.9	[0.5–1.4]	<b>27</b>	<b>12.5</b>	<b>[5.2–30.1]</b>								
	Insurer	28	63	1.9	[0.8–4.7]	82	0.9	[0.3–2.8]	78	0.8	[0.3–2.1]	48	1.9	[0.8–4.7]	13	2.7	[0.6–11.9]								
	GPs	120	10	1		72	1		31	1		10	1		67	1									
W2	Supervisors	107	6	0.5	[0.2–1.5]	78	1.4	[0.7–2.6]	24	0.7	[0.4–1.2]	13	0.5	[0.2–1.5]	71	1.5	[0.7–2.9]								
	Public <sup>e</sup>	109	12	1.2	[0.6–2.8]	64	0.7	[0.4–1.2]	39	1.4	[0.8–2.4]	34	1.2	[0.6–2.8]	56	1.9	[0.9–4.2]								
	Insurer	28	12	1.1	[0.3–4.4]	65	0.7	[0.3–1.8]	41	1.5	[0.6–3.6]	30	1.1	[0.3–4.4]	63	2.9	[0.6–13.6]								
	GPs	120	31	1		30	1		73	1		36	1		10	1									
	Supervisors	107	44	1.7	[0.9–3.1]	<b>67</b>	<b>4.9</b>	<b>[2.7–8.7]</b>	80	1.5	[.8–2.9]	29	1.7	[0.9–3.1]	13	1.2	[0.5–2.9]								
W3	Public <sup>e</sup>	116	40	1.4	[0.8–2.5]	<b>45</b>	<b>2.0</b>	<b>[1.1–3.4]</b>	79	1.3	[.7–2.8]	42	1.4	[0.8–2.5]	<b>17</b>	<b>2.3</b>	<b>[1.1–5.1]</b>								
	Insurer	28	<b>61</b>	<b>3.4</b>	<b>[1.3–8.6]</b>	<b>65</b>	<b>4.5</b>	<b>[1.8–11.2]</b>	86	2.2	[.7–6.8]	<b>42</b>	<b>3.4</b>	<b>[1.3–8.6]</b>	4	0.4	[0.1–3.4]								
	GPs	120	4	1		34	1		25	1		30	1		60	1									
	Supervisors	107	7	1.7	[0.5–5.3]	<b>68</b>	<b>4.3</b>	<b>[2.4–7.5]</b>	<b>41</b>	<b>2.1</b>	<b>[1.2–3.7]</b>	51	1.7	[.5–5.3]	<b>30</b>	<b>0.3</b>	<b>[0.1–.6]</b>								
	Public <sup>e</sup>	133	<b>12</b>	<b>3.1</b>	<b>[1.1–8.8]</b>	<b>61</b>	<b>3.1</b>	<b>[1.8–5.3]</b>	<b>56</b>	<b>3.8</b>	<b>[2.2–6.6]</b>	<b>67</b>	<b>3.1</b>	<b>[1.1–8.8]</b>	<b>23</b>	<b>0.4</b>	<b>[0.2–.9]</b>								
W4	Insurer	28	13	3.2	[0.7–14.3]	46	1.7	[0.7–4.0]	37	1.8	[0.7–4.3]	48	3.2	[0.7–14.3]	<b>26</b>	<b>0.2</b>	<b>[0.1–.6]</b>								
	GPs	120	4	1		34	1		25	1		30	1		60	1									

General practitioners (GPs) (n = 120), supervisors (n = 107), the public (n = 259), the insurer (n = 28), in assessment of health, comorbidity, work capacity and in suggestion of either 100 % sick leave, partial sick leave or full time work in four vignette cases of workers with comorbid subjective health complaints

Bold represent significant findings *p* < 0.05

<sup>a</sup> Versus Good health

<sup>b</sup> Versus No comorbidity

<sup>c</sup> Versus Work capacity not reduced

<sup>d</sup> Versus 100 % sick leave

<sup>e</sup> Public, n = 259, but not all volunteers in the Public group watched all the four vignettes and this explains the shifting n in this group

side of the body, to have significantly poorer health, more severely reduced work capacity and accordingly more in need of sick leave compared to the GPs. In general, within all stakeholder groups, we observed label diversity and we observed differences between stakeholders in acknowledging comorbidity.

### An Understudied Field

To our knowledge, only one study has looked at stakeholder's interpretation of health and sick leave before, and they did this based on written vignettes of workers with musculoskeletal complaints [13]. Our findings are generally in line with their results. For instance, like in our study, they found differences between physicians (GPs and medical consultants) and the public [13]. However, in Haldorsen's study [13], the GPs were significantly more restrictive in suggesting sickness absence for musculoskeletal pain, generalized pain, acute grief and exhaustion, than the public.

In contrast to the results described by Haldorsen [13], based on the assessment of worker 1, our results indicate that GPs are more likely to suggest full time sick leave for psychological problems, generalized pain and unexplained fatigue whereas the public is more likely to suggest full time work and partial sick leave. This is reflected in sick leave statistics from Norway where 40 % of all workers on LTSA have a musculoskeletal diagnosis and 20 % a psychiatric diagnosis [17–19].

Health complaints like, psychological problems, generalized pain and unexplained fatigue can be grouped under different terms [20]. We choose the term subjective health complaints [21], and when resulting in work disability, a high level of subjective health complaint comorbidity is common [22–24]. These complaints often present without any clear or consistent organic pathology [25]. GPs in different cultures have been found to apply psychological symptom diagnoses to workers with comorbid subjective health complaints [15] and medically unexplained symptoms [26]. The lack of objective findings and invisible nature of the symptoms are perceived as a burden to the patient [27] and a challenge to the GP [28–31]. Our findings support results from an earlier study showing that GPs tend to sick list workers with complaints that are non-somatic or not objectively verifiable [32]. We could not find any sick leave decision-pattern in the four workers for any of the stakeholders in our data. We observe differences between stakeholders that are interesting, but consistent pattern is difficult to determine. This may be due to the characteristics of the four vignette cases we chose for our study. Different cases may have led to more or less divergence in the assessment between the stakeholders. However we would argue, based on our knowledge, that

the cases we chose provided a good insight into the population we were targeting; workers with work disability due to subjective health complaints. The four video vignettes were chosen to ensure variation in gender, age and symptoms described. The stakeholders choice of labels describing the workers' health problems; musculoskeletal, psychological and general and unspecified, support that we have succeeded in providing good insight into the population we were targeting.

Understanding the public's assessments in our study may be more of a challenge. The public may be viewed as representatives of the Norwegian society, and as Young et al. [7] points out, societies motivation and interests may be less tangible and easy to define than other stakeholders. Still, their views are of course embodied in the society's legislations. The subjective nature of psychological problems, generalized pain and unexplained fatigue represent a difficult topic in Norwegian society. In the legislation, there is no demand for objective medical findings to be entitled to sick leave [33]. However, accepting a neighbour's work disability when there is no visible injury or disease is difficult and we have on-going public debates whether some of the sick leave may be explained by lack of work moral and "laziness". It is difficult to assess whether there has been a shift or change in the Norwegian culture that can explain the difference between our and Haldorsen et al. [13] results. Still, both studies support our hypothesis that different stakeholders make different assessments and this may be an expression of stakeholder's knowledge, what language and labels they have available to describe health problems, and their role in the society. As emphasized in the literature, mutual understanding of the workers' complaints is important in guiding workers and managing LTSA and RTW processes [4]. Therefore, our results may shed light on why it is challenging to help workers stay at work or return to work with subjective health complaints.

Stakeholders interpret the concept of work capacity differently [34], and there is no gold standard in how to assess work disability [35]. This makes it difficult to determine which of the stakeholders in our study made the best assessment. Rather, we take results from our study as a reminder that assessments regarding health and ability to work involve subjective evaluations that also reflect culturally based norms and understandings. In our study, the GPs stand out from the supervisors and the public in that they assess the worker with psychological problems, generalized pain and unexplained fatigue, to have more reduced work capacity. Contrary, for worker 4 who is perceived by all stakeholders to have mainly neurological complaints, the GPs assessed her not to have reduced work capacity, but the supervisors and the public did. How can we explain these differences? Even though it is only two

workers, this difference may represent an issue of importance, at least in the Norwegian setting. It may be explained by the complexity of the social and medical history that worker 1 presents. Most GPs have similar workers on their list, maybe they recognize the complexity, and based on previous experience they either (1) give up on her, or (2) give her some leeway. In light of political efforts and initiatives over the past 10 years in Norway, one may argue that the GPs sick listing behaviour may prevent recovery for this worker. On the other hand, short spells of sick leave may reduce the risk of negative long-term health consequences. A study on burnout among Norwegian doctors showed that 100 % sick leave predicted less burnout 3 years later [36].

Our results show that stakeholders assess the need for sick leave differently and in some settings, this may hamper recovery. Recovery is a term used mainly within the field of psychological health [37], and it means different things to professionals and workers [38]. To professionals it may imply clinical recovery, i.e. less symptoms or health complaints whereas to workers it may imply personal recovery, i.e. living a meaningful, autonomous life within the limits of their health's constraints. Hence, working may be an important arena to achieve this and facilitate restoration of a meaningful sense of belonging to one's community [39]. The concept of recovery fits well with the philosophy behind the main goals in the Cooperation Agreement on a more Inclusive Working Life (IW) in Norway [40]. These goals are; to enhance presence at work, prevent and reduce sick leave and prevent exclusion and withdrawal from working life. Our results however seem to uncover disagreement between stakeholders who should or could be included in working life. We argue that this disagreement can hamper and prevent personal recovery and RTW for sick listed workers because of contradictory messages from important others.

Who should be the most important stakeholder? The workers on LTSA highlight the burden of lack of objective findings and the importance of social networks, positive attention and trust [27]. Similar aspects are highlighted by Norwegian GPs when arguing their reluctance to enrolling workers with subjective health complaints in a randomized controlled trial [41]. The GPs emphasize the importance of the individualized assessment based on knowledge about the worker's personality, vulnerability, and family situation [41]. A 6-year medical degree and clinical experience may be used as an argument that GPs are more qualified to do these assessments than other stakeholders. However, physicians' non-adherence to evidence based guidelines [42] may open this for discussion. Still, sick leave and RTW decisions for the individual are not easily guided by guidelines and a qualitative study has shown that sick leave decisions are complex and influenced by the GPs attitudes,

believes and personalities [28]. Even though this is a difficult part of the GPs work, they apply specific strategies in these encounters to try to counteract the length and effect of sick leave [9]. GPs focus on the benefits of work, early return to work, and cooperation with stakeholders by building alliance with the workers to get a deeper understanding of the patient's life situation. They describe that in workers with subjective health complaints that demand sick leave, one strategy may be to acknowledge the workers need for sick leave initially and then start negotiating in the next consultation [9]. Still, based on our findings one may argue that the public and the supervisors are more in line with the Inclusive working life (IW) initiative and recommendations for workers with subjective health complaints.

On the other hand, the differences we have observed may simply represent lack of understanding by the public and supervisors, about the complexity of the life situation of workers like worker 1. One may argue that the GPs, based on training and clinical experience, hold the key to the best management. However, sickness absence has been identified to have adverse health effects [43, 44]. The public was six to twelve times more likely to suggest partial sick leave and full time work compared to the GPs for worker 1. Here, the public is in line with the literature suggesting that work re-entry may prevent degradation of psychological well-being and help sustain social relationships [45]. This is the case when conditions are optimal, and getting back to work may have healing effects, help to restore social bonds and reinsert the individual into a valued social existence [45]. However, not all studies find a direct link between RTW and well-being or quality of life [5, 46].

### **Workers with Comorbid Health Complaints: A Marginalised Group?**

A high number of pain sites is associated with more severe physical, psychological, and social problems [47]. Workers with comorbid subjective health complaints are viewed as complex cases and have been referred to as "difficult" and "heartsink" workers in the literature [28–31, 48]. This is a marginalized group [27]. Overall, the stakeholders identified high levels of comorbidity for these workers and this has important implications for the management. A systematic review dealing with phenomena associated with sick leave among medically unexplained physical symptoms (MUPS) patients in primary care concluded that symptom burden increases work limitations [49]. We argue that this aspect is not incorporated and managed comprehensively in LTSA and RTW management and as pointed out by Hughes [50], guidelines and management tend to be limited in their focus to single diseases and conditions.



## Limitations and Strengths

We have previously demonstrated that using video vignettes may be an appropriate method of studying variability in diagnostic labels and sick leave suggestions between GPs within Scandinavia [14, 15]. However, some of our CI are wide, indicating that there is low statistical power for those estimates. The low number in the insurer group weakens the external validity of the findings for this stakeholder group in relation to the others.

Our self-recruited sample of stakeholders may represent individuals that are particularly interested in issues related to subjective health complaints and sick leave. The effect of such interest on the assessments and our findings is difficult to disentangle, but the selected sample of stakeholders in our study weakens the external validity of the results.

Our results are based on four selected video vignette cases and hence we cannot conclude how stakeholders assess all workers with comorbid subjective health complaints. We found significant differences in stakeholder assessments mainly for two of the cases presented and these results indicate that stakeholders' assessments may vary. This should be further explored.

Since the data were based on video vignettes, which enabled standardized and identical information, to be provided to all study participants, the internal validity is in our opinion increased in comparison to more traditional approaches with described situations or self-reported situations from own practice. The standardization may also have increased the reproducibility of the results and make it easy to replicate the study in other settings, nationally and internationally, and thus provide comparable results across various settings. Our approach opened up for emotional involvement, because the workers were presented as video vignettes. Nilsen et al. [51] found that emotional involvement in GP-patient encounters may play an important role in health, work capacity and sick leave issues. However, our participants were not able to ask follow up questions that may have changed their understanding and decisions regarding the workers, hence threatening the internal validity of the results.

## Implications and Conclusions

Our results seem to suggest that stakeholders have divergent assessments of worker complaints, health, work capacity, and sickness certification in workers with comorbid subjective health complaints. This finding may indicate that this marginalized worker group will be met with divergent, and potentially, lack of understanding by some of the stakeholders commonly involved in LTSA follow-up. This is likely to influence worker's health and

functioning in working life through further marginalization and exclusion.

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## Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no conflict of interest.

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