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Regular Article

General practitioners' description of functioning in sickness certificates

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ABSTRACT

Introduction: In Norway, general practitioners (GPs) are the gatekeepers who provide written assessment of patients' functional ability to provide documentation for the Norwegian Labor and Welfare Administration for decisions about welfare benefits. This article investigates the description of functioning in sickness certificates according to the bio-psycho-social model described in WHO's International Classification of Functioning, Disability and Health (ICF). In particular, the study focuses on medical sick notes for young patients with common mental disorders.
Methods: This study utilized directed content analysis, where codes were defined a priori. A simplified bio-psycho-social model with ICF as a framework was used to categorize functional assessment. 393 sick notes were analyzed in Norway between January 2018–January 2020.
Results: The results show that more than half (50.4%) of the certificates contain no information about function on any level, and that the diagnosis was the only indication of a patient's function. The biological perspective was the most common description in 39,9% of the certificates, 13,5% had a description of the patient's functioning from an individual perspective. The social perspective was only adopted in 12.0% of certificates. Only 4 certificates (1.0%) described all three perspectives (biological, individual, and social) and mentioned what the individual could do despite the illness (resources).
Conclusions: We find that information on functional ability is limited on sickness certificates in Norway. The descriptions given were mainly from the biological perspective and without social context, which is consistent with prior research.

1. Introduction

1.1. Sickness absence and the role of the general practitioner (GP) in Norway

Grounded on the central role GPs play as gatekeepers in the Norwegian welfare system and inspired by the theoretical perspective of Lipsky (Lipsky, 1980), this study focuses on the written content of medical sick notes for young patients with common mental disorders. Specifically, we examine how GPs provide written assessments of patients' functional (dis)ability to provide documentation for the Norwegian Labor and Welfare Administration (NAV) for decisions about welfare benefits. These assessments raise fundamental questions about what GPs are educated and trained to do, and what might give potential tensions in their role as medical street-level bureaucrats (Cooper et al., 2015).

Psychiatric disorders account for one-third of disability pay in the OECD countries (Harvey et al., 2009), and even though the more severe mental conditions have a higher prevalence of sickness absence and disability, it is the milder and more ubiquitous psychiatric conditions, such as anxiety and depression, that account for most of the disability. Mykletun (Mykletun & Knudsen, 2009) has found that mental disorders reduce the working life of patients by 21 years on average, almost twice as much as cancer and musculoskeletal disorders combined. In Norway, psychiatric disorders are among the main causes of sickness absence – they account for 24% of days lost to sickness among women and 19% among men (NAV. Statistics from the Norwegian).

In parallel, the amount of administrative documentary work that doctors must perform is increasing (Sinsky et al., 2016). A pivotal player in handling this burden of documentation is the GP, who acts as the

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gatekeeper between the welfare system and the patient. In this paper, we are inspired by the theoretical perspective of Lipsky (Lipsky, 1980), who introduced the term "street-level bureaucrat" (SLB). According to him, SLBs are "public server workers who interact directly with citizens in the course of their jobs, and who have substantial discretion in the execution of their work (Lipsky, 1980); GPs can be argued to fall under this category (Checkland, 2004). Lipsky's sociological meta-framework provides an understanding of people's working methods in health- and social services, the professionals tasked with converting political ambitions, especially welfare and health services, into practice. In a society or system in which demands and expectations far exceed capacity, the bureaucrats must adopt coping mechanisms for managing workload and conflicting demands.

The general practitioner in Norway plays a pivotal role in executing a long list of tasks regulated by the government (Rønnevik, 2020) and preventive healthcare, both on an individual and societal level. Individual treatment of patients and health promotion work are the areas best known and most studied. Another aspect of the work of the GP is serving as an impartial expert for the Norwegian labor and welfare administration NAV, an obligation by law under the National Insurance Act (Rettskildene, 2011). Evidence suggests that the GP's role as gatekeeper is difficult to handle (Gérvas et al., 1994; Mulyanto et al., 2021; Wammes et al., 2014), and the roles may be misunderstood and misinterpreted – by the patient, the general practitioner and policymakers.

Medical certificates, which come in standardized forms, including sick notes for short-term sickness absences, play a crucial role in the administration of benefits in the welfare state and can be issued only by authorized health personnel, usually the GP. In Norway, sick notes can be issued only for the first 12 months of sickness absence, after which more comprehensive medical certificates are demanded as the claimant applies for long-term benefits. A citizen is eligible for sickness claims only if his or her work disability is due to loss of function directly related to *illness, injury or defects.*

According to the Norwegian National Insurance Act §8-4, a person must fulfill the "medical term" to be eligible for compensation:

"Sickness pay can be given to those that are disabled because of a disability that clearly is caused by illness or injury. Disability caused by social or economic problems and such does not meet the criteria." (Rettskildene, 2011).

It is NAV that ultimately has the power to approve or decline the application, but the medical certificate and expert opinion play a crucial and, in many instances, the deciding role. The simplified version is articulated by NAV as follows:

"The patient presents to the GP with a reduced work capacity. The physician must decide if the disability clearly is caused by illness or injury. If yes, the patient may receive a sick note, preferably with a diagnosis made by the physician. It is important to note that all the above criteria must be met to be eligible for sickness benefit." (Solli, 2020).

In issuing these certificates, therefore, GPs must not only ascertain the medical basis of their patients' complaints, filtered through their own subjective and professional reasoning, but also navigate the legislative and social demands put upon them. The sick note forms issued by NAV ask the GP to consider the patient's workplace, their functional capacity, and in some cases their ability to work in both their current workplace and other potential workplaces. It is well known that GPs, both nationally and internationally, lack knowledge in above stated fields – a problem GPs themselves acknowledge (Aarseth et al., 2017; Gabbay, 2010; Kiessling & Arrelöv, 2012; Löfgren et al., 2010; Swartling et al., 2008; Wynne-Jones et al., 2010). In a report from 2006 (Steihaug, 2006), the medical certificates written by GPs are diversely described: "*Some are very good, some are acceptable, some are worthless and some are scandalous.*" Aarseth (Aarseth et al., 2019) has used a qualitative linguistic approach to examine the disability certificates issued by Norwegian GPs and found that they see themselves as the patient's advocate and that they may be conflicted, employing rhetorical strategies balancing between physicians' integrity and their wish to comply with their patients' wishes.

1.2. The Norwegian sick note and functional ability

On the relationship between functional ability and the ability to work, the Norwegian Insurance Act is quite clear:

"The assessment of the incapacity for work must be based on an assessment of function. The physician must always consider if the member can work or be in work-related activity. The physician and other health personnel, in cooperation with the employee and the employer, have a duty to assess the employee's functional ability." (Folketrygdloven, 2011).

Of particular note in this guidance is the insistence that attention to functional ability, and not solely *dis*ability, is required for correct assessment. This dual emphasis, addressing both an individual's strengths and weaknesses, underscores the necessity for acquiring comprehensive and well-balanced information within the decision-making frameworks of NAV. Achieving this equilibrium becomes instrumental in crafting precise interventions and support strategies that should be finely attuned to each individual's unique profile. This should not only empower individuals to optimize their capabilities but also attends to specific areas necessitating assistance, thereby enhancing the overall effectiveness of interventions.

The obligation of the GPs by law is therefore to determine whether sickness is the primary cause of reduced work capacity, implicitly having done a functional assessment when issuing a sick note. Interestingly, the Norwegian sick note tailors the questions asked to how long the user has received sickness pay: forms submitted at 7, 17 and 39 weeks of sickness certification require a more detailed description by the physician. Only in week 39 does NAV specifically ask for a description of functional status in the sick notes.

The International Classification of Functioning, Disability and Health (ICF) was officially endorsed by all 191 WHO Member States in 2001 as the international standard for describing and measuring health and disability. This model takes a broad approach to the structuring of ability, using a bio-psycho-social model and integration of medical and social context. ICF provides, by this synthesis, a coherent view on different perspectives of health: biological, individual and social. The ICF model can be useful as it is global. The underlying principles of ICF are of universality, etiological neutrality, neutrality of definitions and environmental influence.

WHO considers the ICD (International Classification of Disease) and ICF to be distinct but complementary classifications: patient functioning and health are associated, but functioning is not necessarily a direct consequence of a condition or a disease. As disability exists not in general but rather in reference to an evaluation standard, concepts like environment, life situation or context must be given a crucial part in modern approaches to the definition of disability (Linden, 2017).

To the best of our knowledge, no study focusing on the bio-psycho-social model for functional description in sick notes has been conducted in Norway. Nilsing et al. (Nilsing et al., 2011) have shown that information on functioning in medical certificates in Sweden is scarce; when functioning was described, the description was mainly body-oriented. A qualitative textual analysis of medical certificates of disability in Norway was conducted, showing unclear, ambiguous and possibly misleading information (Aarseth et al., 2017). There is no clear consensus on what constitutes a valid functional description nor what physicians consider when making this assessment.

1.3. Aims

The aim of this article is to use directed content analysis (Krippendorff, 2018) to examine samples of sick notes written by general practitioners for young patients with common mental disorders. We investigate the description of functional ability and disability in sick

notes according to a simplified and pragmatic model developed by the authors, influenced by the International Classification of Functioning, Disability and Health (International classification of functioning, 2001).

2. Research questions

The following research questions are investigated:

To what extent do sick notes written by GPs, which are based on young patients (<35 years) with common mental disorders, serve to contribute to a comprehensive and nuanced understanding of the functional ability and disability of the patients?

1. How do GP's describe functional assessment in sick notes?
2. Is GP's functional description assessment in sick notes different in week 39 compared to weeks 7 and 17?

3. Material and methods

Directed content analysis is a qualitative research method where codes are defined a priori, derived from existing theories or prior research, and are applied to data to systematically analyze and interpret how these concepts manifest within the data (Kyngas & Vanhanen, 1999). Here we use the latter approach, assessing whether sick notes are written in line with our coding template influenced by the bio-psycho-social model of the ICF.

3.1. Data collection

Our material consisted of 414 medical certificates, or sick notes, written by general practitioners working in Norway. We chose to include only sick notes for patients with one of the six most commonly used diagnoses for sickness absence (Table 1). These notes are all written on one of three standardized forms, with approximately one-third from week 7 (n = 117), one third from week 17 (n = 121) and one third from week 39 (n = 155). The certificates were selected by NAV from all counties in Norway according to our criteria and anonymized prior to access by researchers. The anonymization done by NAV consisted of removing information containing names (both personal and institutions), locations and physicians. Gender was also removed from the sick notes; however, gender pronouns were not changed and we can therefore confirm that both genders were represented.

After all the sick notes were read, 15 were excluded because their descriptions were based on information sent previously to NAV, to which we did not have access. Three were excluded because they reported a primary somatic illness with no psychiatric information, two because the cause of sick leave was myalgic encephalomyelitis, and one because the psychiatric diagnosis, schizophrenia, was characterized merely as a psychological symptom. In total, 393 sick notes were analyzed (Fig. 1). The average age of the patients was 28.2 years, with a median of 29 years. The range was 18–34 years of age. All the certificates were written in the period from January 2018 to January 2020. At the time of collection, the cases had already been assessed by NAV.

Table 1
ICPC-2 (International Classification of Primary Care) classifications included in our research.

P01	Feeling anxious/nervous/tense
P02	Acute stress reaction
P03	Feeling depressed
P29	Psychological symptom/other complaint
P74	Anxiety disorder/anxiety state
P76	Depressive disorder

3.2. Inclusion- and exclusion criteria

Inclusion criteria:

- Patients with a diagnosis as specified in Table 3
- Age <35 years old at time of sick leave
- Sick leave in the period 01.01.2018 - 01.01.2020
- Only one sick note for each patient was obtained

Exclusion criteria:

- Diagnosis - additional diagnosis on sick note not listed in Table 3
- Graded sick leave (only patients with 100% sick leave were included)

ICF identifies three levels of human functioning: functioning at the level of the body or body part, the whole person, and the whole person in a social context. Disability, therefore, involves dysfunction at one or more of these levels, leading to impairments, activity limitations and participation restrictions. It is important to note that because the ICF framework in its entirety is comprehensive, with more than 1400 categories, it has limited use in clinical practice. It was, therefore, necessary to create a condensed framework or template that captures the essence of the bio-psycho-social model upon which ICF is founded and retain a viability for clinical use. This was done by making sure to incorporate all overarching perspectives of the bio-psycho-social model. For a more systematic overview, we put all *limitations* on functional ability into the three overarching categories (biological, individual and social), while any capacity, ability to participate or resources retained were put into the category of resources. To our knowledge, this specific model has not been used before. Our simplified framework will act as a template for our research (Fig. 2).

The template was used to code all sick notes into the corresponding categories to ascertain how functioning is described by GPs in Norway and to what extent a person's disability is described according to specific observed factors or merely through inferred knowledge about the diagnosis. Table 4 shows examples of the analysis performed. In an effort to verify this method and increase its reliability prior to coding by the first author, a sample of 41 randomized anonymized sick notes were coded by two experienced physicians, a GP with over 30 years of experience and an occupational physician who works as a consulting physician for NAV, along with the aforementioned first author who has 15 years of experience as a physician, mostly as a general practitioner, and also works as a consulting physician for NAV. A Fleiss'kappa score was calculated for each category for the first 41 sick notes coded by 3 different physicians. (Table 2).

For interpretation of the results, we use the Landis and Koch instrument (Landis & Koch, 1977). Although this instrument has arbitrary divisions, it provides a valuable benchmark for discussions on specific examples.

As Table 3 shows, all kappa scores lie within the interval of 0.650–1.000, indicating high levels of reliability for the coding of the material.

The goal of a directed approach to content analysis is to validate or conceptually extend a theoretical framework or theory. Existing research can help focus the research question. It can provide information about the variables of interest, thus helping to determine the initial coding scheme (Hsieh & Shannon, 2005).

3.3. Ethics approval

The project was approved by the Data Protection Official for Research, the Norwegian Directorate of Labor and Welfare, and the Council of Secrecy and Research in the Ministry of Justice and Public Security. Due to the amount of data collected and the anonymization of the material prior to research, no informed consent was issued.

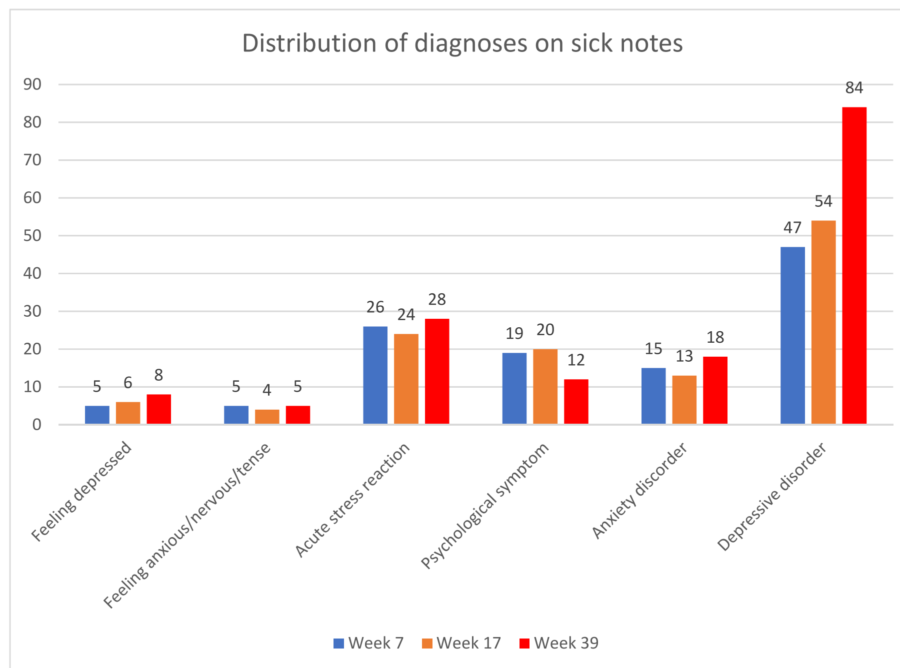

Fig. 1. Distribution of diagnoses on sick notes.

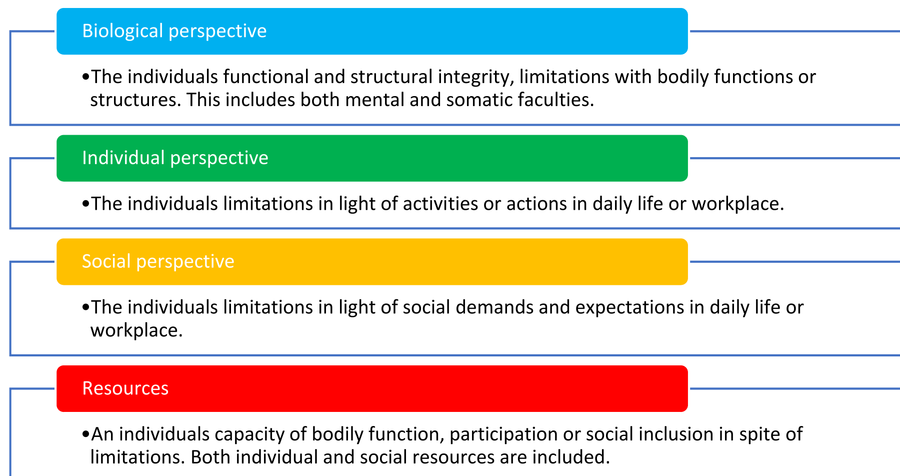

Fig. 2. Coding template of the bio-psycho-social model for use in our research.

Table 2
Results from Fleiss' kappa analysis.

Kappas for individual categories for 3 coders for 41 effective subjects						
Rating category	Kappa	Standard error	Z-score	P value	Lower 95% asymptotic CI bound	Higher 95% asymptotic CI bound
Biological perspective	.967	.090	10.730	.000	.791	1.144
Individual perspective	.715	.090	7.933	<.001	.539	.892
Social perspective	.650	.090	7.204	<.001	.473	.826
Resources	1.000	.090	11.091	.000	.823	1.177
No information	.826	.090	9.165	.000	.650	1.003

4. Results

4.1. Characteristics of the sickness certificates

The content of the analyzed texts varied from no words at all to several paragraphs on functional assessment, most of them containing a single line of text. The Fleiss'kappa scores for the 41 randomized sickness certificates from all three time-points are shown in Table 2. We used Fleiss' kappa to assess the rater agreement between three independent interraters (Table 2). There were no consensus discussions after scoring. All freetext in the sickness certificates was read and analyzed to find any functional descriptions. If such information was present, it was most often found in the specific questions on the sick leave (6.3–6.6.3 in supplementary material).

Table 3
Interpretation of Fleiss' kappa (K) from Landis & Koch, 1977.

K (Kappa score)	Interpretation
<0	Poor agreement
0.0–0.20	Slight agreement
0.21–0.40	Fair agreement
0.41–0.60	Moderate agreement
0.61–0.80	Substantial agreement
0.81–1.0	Almost perfect agreement

Table 4
Coding examples from our sick notes.

Examples from sick notes	Coding categories
"Stress over a period of time has caused problems with sleep and general tiredness"	Biological perspective
"Unease, anxiety and obsessive thoughts"	Biological perspective
"Palpitations, increasing blood pressure"	Biological perspective
"Struggling with day-to-day activities"	Individual perspective
"Multiple strains recently which have caused problems with interacting with customers in her work"	Individual perspective
"… informs me that several friends have left her. Anxiety attack at a relative's house and was thrown out of her apartment …"	Social perspective
"work overload/stress from her work that causes psychological reactions. It is possible work change is necessary but too early in the process at the moment"	Social perspective
"more stable, increased exposure to social settings, finds more calm and makes small goals for herself. Daily visits to library, reading and concentrating. It looks very promising"	Resources
"… has gotten assistance from child protective services which gives relief …"	Resources

4.2. *Description of function*

All 393 certificates were analyzed, including in the weeks where NAV does not specifically ask for functional description (week 7 and 17). In 198 certificates (50.4%) there was no description of function at any level. We found that the diagnosis in many of these certificates was the only means of describing the patient's function. In other certificates, other information was relayed, such as prognosis, eligibility for sickness pay and sickness of family members, but nothing pertaining to the illness's effect on the patient's biological framework or the limitation it created from an individual or social standpoint. No information was offered about capabilities despite illness.

There were 157 of certificates (39.9%) that described functioning from a biological perspective. Pain, sleep disturbances, anxiety and concentration problems were typical descriptions linked to biological function. All these were described as having a negative impact on the patient.

In 53 of the certificates (13.5%) we found description in various ways of the patient's functioning from an individual perspective, either for daily life, work, or both. The social perspective was adopted in 47 certificates (12.0%), with these descriptions pertaining mostly to struggles in the workplace or relational difficulties. Only 4 certificates (1%) described or touched upon all four aspects in our template (see Fig. 3), incorporating all aspects of the bio-psycho-social model and also describing what the individual could do despite the illness (resources).

Looking at the specific weeks of sickness certification (Checkland, 2004; Swartling et al., 2008; Veatch, 1973) we found similar results (Table 5). Interestingly, only in the sickness certification for week 39 does NAV specifically ask for a functional description of the patient (*how does this affect functional ability/ability to work?*). In spite of this, 80 certificates (51.6%) at 39 weeks gave no information on function, and only 4 (2.6%) had any information on the resources or capacity of the patient.

5. Discussion

The main findings in this study indicate that sickness certifications in Norway provide limited information on functioning. In the normative sense, functional assessment may serve as the foundational basis for decisions regarding sickness benefits within the Norwegian Labor and Welfare Administration (NAV). However, in the factual sense, sickness certifications seem to offer limited insights into an individual's functioning. In effect, the majority of the sickness certificates in our research did not include enough information on functional ability for the social workers at NAV to make an informed decision about sickness benefits. Moreover, when NAV asks explicitly for information on function, it does not seem to increase the likelihood of them receiving it. This constitutes a problem as NAV is not only tasked with decision on sickness benefits, but also activating their clients to return to work – the functional description (and not merely the diagnosis) is the descriptor and the de facto key to understanding the limitations and possibilities of each individual.

The descriptions given were mainly from the biological perspective. This is in line with prior international research in the field (Aarseth

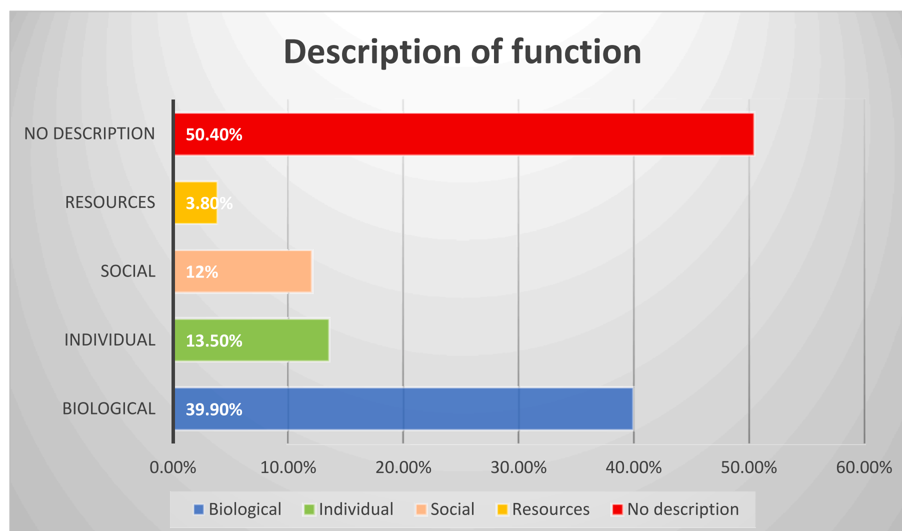

Fig. 3. Description of function in all 393 sickness certificates.

Table 5
Results of content analysis on functional description.

Sickness Certification Week	Biological Perspective	Individual Perspective	Social Perspective	Resources	No Information about Function
Week 7 (n = 117)	45.3% (n = 53)	11.9% (n = 14)	15.4% (n = 18)	4.2% (n = 5)	43.6% (n = 51)
Week 17 (n = 121)	33.9% (n = 41)	12.4% (n = 15)	12.4% (n = 15)	5% (n = 6)	55.4% (n = 67)
Week 39 (n = 155)	40.6% (n = 63)	15.5% (n = 24)	9.0% (n = 14)	2.6% (n = 4)	51,6% (n = 80)
Total (n = 393)	39.9% (n = 157)	13.5% (n = 53)	12% (n = 47)	3.8% (n = 15)	50.4% (n = 198)

et al., 2017; Brage et al., 2008; Nilsing et al., 2011; Slebus et al., 2007; Söderberg & Alexanderson, 2005). According to Ilmarinen (Ilmarinen, 2001), models for work ability can include biomedical aspects, but must also take into account both human resources and social demands to understand individual work ability.

We decided to use the framework model of the ICF and the bio-psycho-social model. However, we recognize its shortcomings when it comes to clinical translation. One study in Norway and Sweden found that a majority of GPs found sickness certification problematic and that a higher frequency of sickness certification consultations resulted in an elevated risk of experiencing them as problematic (Winde et al., 2012); another study found that there is both difficulty in acting and reluctance to act in accordance with functional assessment demands (Krohne & Brage, 2008). One systematic review on difficulties related to sickness certification (Letrilliart & Barrau, 2012) showed that this represents a multi-factorial challenge with relational, organizational and political facets and should be addressed as such.

5.1. Street-level bureaucrats

Lipsky's meta-theoretical perspective provides an overall understanding of central aspects of the GP's work towards NAV, but the theory does not explain the study's findings. At the same time, Lipsky's meta-perspective is only one of the various sociological theoretical candidates that can help interpret the results. Lipsky's framework focuses on understanding and meaning-making, as opposed to explanation, as the primary purpose of research.

It has previously been suggested that GPs can be characterized at least in part as Lipskian street-level bureaucrats (Checkland, 2004). These professionals regularly make decisions that impact our everyday lives and influence what becomes de facto public policy (Jansson & Erlingsson, 2014). Street-level bureaucrats, in general, harbor high ideals and noble ambitions for their work, and use coping mechanisms, consciously or not, to cope with psychologically exhausting workloads (Nielsen, 2008). According to Lipsky, there are two distinct coping mechanisms SLBs employ to survive in this landscape of chronic scarcity of resources and ever-increasing demands: limiting client demand and *creaming* (cherry-picking). Winter and Nielsen (Nielsen, 2008) have added more strategies to the theory, of which automation of output is the most notably applicable in the case of the GP. Our findings might usefully be interpreted in light of such mechanisms, such as automation of sickness certification by diagnosis and not functional assessment.

Although the Lipsky perspective can provide a general, overarching interpretation og GPs use of discretion regarding sickness certificates, the perspective does not explain the mechanisms underlying GPs practice. Another theoretical approach could have provided understanding of the factors influencing GPs behavior in this matter. Hence, there is need for research to improve understanding of these mechanisms if the current situation is to be remedied.

5.2. Psychiatric diagnosis

Illness and diagnosis, especially for psychiatric disorders, are not concepts that can be interpreted and discussed in a vacuum; rather, they must be considered in the context of the society in which the individual lives and works. Veatch (Veatch, 1973) proposes that all diagnoses must have a cultural foundation to be given the status of an illness. Biological aberration is not necessarily enough to constitute a person being ill. For mental disorders, where the objective biological markers make way for the more social and subjective "feeling, thoughts and behavior", the role of the physician may transcend that of simply finding (and curing) the illness. In our society and culture, they are given the power of conferring legitimacy through diagnosis. Based on the premise that "all models are wrong, but some are useful" (Box, 1979) it might be reasonable to critically review the authoritative list of what is considered to be mental disorders, the diagnostic and statistical manual of mental disorders (DSM). Andreasen proposes that there has been a steady decline in the teaching of careful clinical evaluation targeted to individual problems and social context after the implementation of DSM (Andreasen, 2007). Frances (Frances & Widiger, 2012) argues that the DSM has fundamental conceptual issues, including elusive definition of mental disorders, limits of descriptive psychiatry and an absence of a unified theoretical model.

Diagnosing psychiatric disorders can be difficult and time-consuming to define as these disorders often have fewer definitive objective measures than their somatic counterparts and demand more clinical work to achieve high validity rates (Aboraya et al., 2005). The idea that psychiatric disorders can be categorized and evaluated as mere representations of a biological system and not in a social and cultural context may be seen an example of "the mereological fallacy" (Bennett & Hacker, 2022).

With this understanding, one should think critically about the requirement from NAV that the patient be diagnosed as early as possible, merely to satisfy a bureaucratic model. NAV asks (or rather demands) that Norwegian GPs offer their expert assessments concerning eligibility for sickness benefits. However, it is important to recognize that a diagnosis and the subsequent provision of prolonged health-related benefits can significantly impact not only the patient's self-perception but also how society perceives the individual (Grødem et al., 2014). Placing emphasis on medical diagnoses as criteria for inclusion poses the risk of medicalizing both social problems and unemployment (Conrad, 1992; Halfmann, 2012).

5.3. Implications for policymakers

Policymakers should acknowledge that any interventions aimed at increasing the quality of sickness certification should be implemented at multiple structural levels. Zacka argues that studying the state from a bottom-up perspective is essential for understanding the workings of policies in action (Zacka, 2017) and not merely implementing new ideas and expecting different outcomes. Especially in the digital revolution in forms, frontline workers have become moral meditators, interfacing between the individual needs of citizens and the demands of policymakers (Pors & Schou, 2021).

Writing skills are not necessarily self-evident, nor are they taught explicitly in medical school; the implementation of such training should be a priority. Functional assessment, in all its ambiguity and complexity, needs to be made an integral part of the professional curriculum for both NAV and GPs, if the current medico-legal structure of sickness certification is to endure. In our opinion, the questions directed to GPs should be revised and nuanced to better fit the scope of their profession and to ensure a better distinction between the responsibilities of the two parties.

Furthermore, we are missing a national-level consensus on what

constitutes a functional assessment reported by a GP to NAV, a gap that should be addressed with haste. Otherwise, the diagnosis will probably continue to serve in its stead.

6. Limitations

The materials utilized in our study comprised of a single sickness-certification document for each patient, deliberately omitting any transmission of information to NAV prior to the evaluation of the sick note. In cases where the general practitioner asked NAV to consult prior information, we excluded the respective certificate from our analysis. Nonetheless, it is important to acknowledge the possibility of relevant prior information that we did not have access to.

The findings of our analysis are based on relatively short-term sick notes exclusively from young patients with common mental disorders and who prescribed a 100% sickness absence. Consequently, the characteristics and content of these sick notes may differ from those of other patient populations. There are good reasons for assuming the observed patterns may not be representative of sick note practices for patients with different conditions or graded sickness absences.

It is also important to consider the potential influence of our coding scheme on the prevalence of different categories observed in our findings. The coding scheme we developed explicitly includes mental functioning within the "biological perspective" category to retain simplicity and replicability. This will have contributed to an apparent emphasis on the biomedical perspective. Therefore, the interpretation of our findings regarding the prevalence of the different perspectives should be considered within the context of the coding scheme's influence and structure.

By acknowledging these limitations, we recognize the need for caution in generalizing our findings beyond the specific patient sample and sick note context examined. Future studies should aim to address these limitations to provide more comprehensive understanding of sick note practices and functional descriptions by GPs.

7. Conclusions

Our findings suggest that GPs in Norway do not adhere to our model on the assessment of functional description. Interestingly, adherence does not seem to increase when asked directly about description of functioning. The medical certificates examined did not seem to contribute to a comprehensive and nuanced understanding of the individual behind the diagnosis, but rather homogenize a heterogeneous group.

Our findings also suggest that the sickness certificates have limited usefulness as a basis for decision-making about functional ability. The sickness certificates are characterized by an over-emphasis on biological descriptions and a general absence of individual or social functional descriptions. This might result in increased workload for NAV when deciding on benefits, but also cause delay in payment of benefits to the patient and initiation of measures to help people return to work. The assessment of function seems to present challenges and uncertainties among general practitioners, who may face time constraints or lack explicit incentives to incorporate comprehensive information in this regard. This problem should be addressed by policymakers, both on a structural level and through increasing training for and understanding among the street-level bureaucrats. Further research in the interdisciplinary communication between NAV and health services is warranted.

In the medical field, reducing people with simplistic labels should be avoided, such as a mere diagnosis or binary categories of good or bad, health or unhealth, black or white. Instead, we must embrace the complex and nuanced reality of human experience. Acknowledging these shades of grey in the richness of human experience, and by moving away from these reductionist approaches, healthcare professionals and social workers can offer more compassionate and effective care that meets the diverse needs of their patients, improving both their welfare and their well-being.

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CRediT authorship contribution statement

Egidio Niclas D'Angelo: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Writing – original draft, Writing – review & editing, Visualization, Funding acquisition, Project administration. **Ralf Kirchhoff:** Conceptualization, Methodology, Validation, Resources, Writing – review & editing, Supervision. **Kristin Halvorsen:** Conceptualization, Validation, Writing – review & editing. **Karen Walseth Hara:** Conceptualization, Validation, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

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