

# Determinants of approved incapacity leave among health professionals in a South African provincial health department

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## ABSTRACT

**Background:** Sickness absenteeism influences health worker performance, with potentially negative consequences for the quality of patient care, staff morale and universal health coverage.

**Objectives:** The objective of the study was to determine if there was an association between approved incapacity leave, and demographic and occupational characteristics of health professionals employed in the Gauteng Department of Health.

**Methods:** Data were extracted from electronic records of approved incapacity leave stored in the Government's Personnel Salary Administration (PERSAL) system, for the period 1 January to 31 December 2016. Chi-square and multivariable logistic regression analyses were used to determine associations.

**Results:** There were 1 155 incapacity leave approvals for 518 health professionals in the study period. The mean age of those for whom incapacity leave was approved was 46.0 ( $\pm$  10.2) years. The largest group that had taken incapacity leave was professional nurses ( $n = 215$ , 41.5%). The main medical reasons for incapacity leave were mental disorders ( $n = 148$ , 12.8%) and musculoskeletal disorders ( $n = 139$ , 12.0%). The odds of incapacity leave increased with age. Those aged 45 years or older had three times the odds of approved leave than those younger than 35 years (AOR 3.0, 95% CI 2.3–4.0). There were higher odds of approved incapacity leave for health professionals working in the Sedibeng (AOR 2.2, 95% CI 1.5–3.2) and Johannesburg (AOR 1.7, 95% CI 1.2–2.3) districts, than those working in Ekurhuleni.

**Conclusion:** Incapacity leave, a subset of sickness absenteeism, is complex and influenced by individual, workplace and health system factors, thus requiring a multi-pronged management approach.

## INTRODUCTION

Human resources for health (HRH) are a prerequisite for the achievement of universal health coverage (UHC), with increasing scholarly attention on the performance and utilisation of HRH.<sup>1</sup> Absenteeism, defined as the absence from a duty or an obligation, is an important indicator of individual staff performance.<sup>2,3</sup> Absenteeism gives rise to loss in productivity and results in the indirect wastage of HRH.<sup>4</sup> In sub-Saharan Africa, this type of wastage exacerbates staff shortages and further compromises weak health systems.<sup>4</sup>

Sickness absenteeism or temporary work incapacity is unplanned and is defined as an absence from work, associated with illness or injury.<sup>2,5,6</sup> Although sickness absenteeism is problematic in many sectors,<sup>5,6</sup> it is of critical importance in the health sector, affecting the quality of patient care, staff morale and, ultimately, UHC.<sup>2,7</sup> It has been estimated that, globally, around 7% of health workers experience at least one sick leave episode per week and rates as high as 25% have been reported in low- and middle-income countries.<sup>8</sup> In the health sector, high rates of sickness absenteeism could be because of the nature of the caring professions, adverse working conditions, long working hours, decreased autonomy and insufficient support from colleagues and/or supervisors.<sup>5</sup> Numerous studies have demonstrated complex and contradictory associations between sick absenteeism

and demographic characteristics (e.g. age and sex), organisational factors, and occupation.<sup>9,10</sup>

In South Africa, the Public Sector Leave Policy provides for paid sick leave of 36 working days in a three-year cycle.<sup>11</sup> Once exhausted, public servants are eligible to apply for additional sick leave or incapacity leave (previously referred to as temporary disability leave), provided there is a valid medical reason.<sup>11,12</sup> Several studies in South Africa have documented high rates of sickness absenteeism, which are costly; abuse of sick leave; and poor management of sick leave.<sup>13,14</sup> In 2008, a 48.8% absence rate was reported among employees of four hospitals in Gauteng province;<sup>15</sup> and 6% sickness absenteeism among nursing staff was reported at a large, central hospital in the Western Cape province in 2014.<sup>16</sup> In response to the Public Service Commission (PSC) reports on the management of leave in the public service, the Department of Public Service and Administration implemented the Policy on Incapacity Leave and Ill-Health Retirement (PILIR) in 2006 to reduce the reported abuse of sick leave, and to manage the incapacity leave and ill-health retirement.<sup>14</sup> An evaluation of sick leave and incapacity leave trends for the period 2004 to 2009 showed variations by province and health worker category.<sup>14</sup> In the 2014–2016 financial years, incapacity leave cost the Gauteng Department of Health (GDoH) around R14 million (964 008 US dollars; 1USD = R14.50).<sup>17</sup> Furthermore,

almost 40% of the applications for incapacity leave were for absences of one or two days.<sup>17</sup>

Notwithstanding the earlier research on sickness absenteeism in the South African public health sector, there is a dearth of empirical studies on incapacity leave in the public sector, especially among health professionals. Sickness absenteeism research in South Africa has focused mainly on the nursing profession, with little information available for other health professionals. Health systems research should respond to identified policy problems, given the strategic importance of the Gauteng province – host to a quarter of the South African population and generating close to 40% of the country's gross domestic product.<sup>18</sup> Hence, this study was conducted to generate new knowledge on incapacity leave and its determinants in the GDoH.

We aimed to examine the determinants of approved incapacity (additional sick) leave among health professionals in a South African provincial health department. The objectives were to describe the demographic and occupational characteristics of health professionals with approved incapacity leave, and the medical reasons for this type of leave; and to determine whether there was an association between approved incapacity leave, and demographic and occupational characteristics.

## METHODS

This study was a secondary analysis of approved incapacity leave records for the period 1 January to 31 December 2016. We selected 2016 as it was the start of a new sick leave cycle. In theory, every health professional should have had access to all 36 days of sick leave, thus reducing the potential bias of choosing a period at the end of the sick leave cycle.

The GDoH is one of the largest public health departments in South Africa. In 2016, it consisted, inter alia, of a head office, four central hospitals, three tertiary hospitals, nine provincial regional hospitals, 11 district hospitals, and 373 clinics.<sup>19</sup> There were five health districts corresponding to the municipalities of the City of Johannesburg, City of Tshwane, City of Ekurhuleni, West Rand and Sedibeng.

The study population comprised all health professionals – individuals with formal health training, such as doctors, nurses, pharmacists, dentists and rehabilitation therapists – employed in the GDoH in 2016 (N = 46 812).<sup>19</sup> Individuals working in supervisory or management capacities, hereafter referred to as health managers, were also included.

The Government's Personnel Salary Administration (PERSAL) system contains incapacity leave records for all public service employees. The GDoH provided demographic and occupational data of all employees for the 2016/2017 financial year, and the PERSAL dataset of approved incapacity leave for 2016. These data were verified and supplemented by an electronic PERSAL dataset received from the National Treasury. The records were matched through a multi-step process, using unique identifiers, and on the variable of 'job category' to differentiate health professionals from other GDoH employees.

We extracted demographic characteristics (age and sex), occupational characteristics (salary level, category of health professional, etc.), and medical conditions (according to ICD-10 classification) related to approved incapacity leave absences, from the electronic data.

## Data analysis

The demographic and occupational characteristics of the study, related to incapacity leave approvals, are presented as frequencies and proportions.

To investigate the independent effects of the exposure variables

(demographic and occupational characteristics) on the probability of incapacity leave among health professionals, bivariate analysis was conducted, using the Chi-square test. Variables that were significant at a 20% level were included in a multivariable logistic regression model.

Cross tabulations and variance inflation factor (VIF) analysis were performed to determine collinearity between covariate variables. Subsequently, the variable, 'salary level', was excluded from the regression model as it was related to 'job category'.

The Human Research Ethics Committee (Medical) of the University of the Witwatersrand provided ethical approval for the study (clearance certificate no. M180522). The GDoH Research Committee also gave permission for the study.

## RESULTS

### Demographic and occupational characteristics

In 2016, 46 812 health professionals were employed in the GDoH; 518 (1.1%) had 1 155 episodes of approved incapacity leave (Table 1). The majority were female (n = 473, 91.3%). The mean age was 46.0 years ( $\pm$  10.2); 35.9% (n = 186) were aged 45–54 years. The median duration of service was eight years (IQR 5–16); most (n = 320, 61.8%) had 1–10 years of service. The highest proportion of health professionals with incapacity leave were mid-salaried employees (n = 267, 51.5%). Professional nurses accounted for 41.5% (n = 215) of the 518 health professionals with approved capacity leave, while all categories of nurses accounted for 78%. Most were from the City of Johannesburg health district (n = 232, 44.8%), and most were employed at central and tertiary hospitals (n = 221, 42.7%).

### Reasons for approved incapacity leave

Almost half (47.1%) of the 518 health professionals with approved incapacity leave had more than one episode. The leading medical reasons for incapacity leave episodes were mental and behavioural disorders (n = 148, 12.8%) and musculoskeletal disorders (n = 139, 12.0%), as shown in Table 2.

The proportion of incapacity leave episodes due to mental or behavioural disorders was highest among health professionals aged 35 years and younger (33.8%) and lowest among those  $\geq$  55 years (12.2%) (data not shown). Incapacity leave due to diseases of the musculoskeletal system was highest among those aged 45–54 years (55.4%), followed by those older than 54 years (22.3%). Incapacity leave due to diseases of the respiratory system were highest among those in the 45–54-year age group (33.3%). Almost half of all neoplasm-related incapacity leave was taken by those aged 45–54 years (46.5%).

### Associations between demographic and occupational characteristics and approved incapacity leave

The odds ratios for the associations between demographic and occupational characteristics and approved incapacity leave are presented in Table 3. Both age and health district were predictors of incapacity leave.

The odds of incapacity leave were three times higher for those older than 45 years than for those younger than 35 years. The odds of incapacity leave were higher among health professionals working in the Sedibeng health district (AOR 2.2, 95% CI 1.5–3.2) and in the Johannesburg health district (AOR 1.7, 95% CI 1.2–2.3), compared to those working in Ekurhuleni.

The protective factors for incapacity leave among health professionals were being a member of the medical staff (AOR 0.3, 95% CI 0.2–0.6) and being employed at 'other' types of facilities/services (AOR 0.5, 95% CI 0.4–0.7). The odds of incapacity leave for male health professionals was significantly lower than that for female health professionals (AOR 0.7, 95% CI 0.5–0.9, p = 0.016).

**Table 1. Characteristics of GDoH health professionals and those with approved incapacity leave, 2016**

	Health professionals				p value
	All N = 46 812		With approved incapacity leave (n = 518)		
	n	%	n	%	
<b>Demographic characteristic</b>					
Sex					< 0.001
Female	38 320	81.9	473	91.3	
Male	8 492	18.1	45	8.7	
Age (years)					< 0.001
< 35	17 952	38.4	93	18.0	
35 to 44	12 749	27.2	116	22.4	
45 to 54	9 843	21.0	186	35.9	
≥ 55	6 268	13.4	123	23.8	
<b>Occupational characteristic</b>					
Years of service					< 0.001
1–10	35 521	75.9	320	61.8	
11–20	5 947	12.7	83	16.0	
21–30	3 905	8.3	87	16.8	
≥ 31	1 439	3.0	28	5.4	
Salary level					< 0.001
Low	18 653	39.9	154	29.7	
Mid	17 386	37.1	267	51.5	
High	10 773	23.0	97	18.7	
Job category					< 0.001
Professional nurse	16 715	35.7	215	41.5	
Staff nurse	7 509	16.0	98	18.9	
Allied health professional	7 180	15.3	60	11.6	
Nursing assistant	6 825	14.6	91	17.6	
Medical staff	6 060	13.0	15	2.9	
Health manager	2 523	5.4	39	7.5	
Health district					< 0.001
Johannesburg	19 525	41.7	232	44.8	
Tshwane	14 136	30.2	153	29.5	
Ekurhuleni	7 243	15.5	56	10.8	
West Rand	3 393	7.3	30	5.8	
Sedibeng	2 515	5.4	47	9.0	
Service group					< 0.001
Central and tertiary hospital	17 463	37.3	221	42.7	
Other type of facility/service	9 855	21.0	55	10.6	
Regional hospital	7 695	16.4	67	12.9	
District hospital	4 368	9.3	78	15.1	
Primary healthcare	5 265	11.3	72	13.9	
Specialised hospital	2 166	4.6	25	4.8	

## DISCUSSION

In 2016, 518 (1.1%) of the 46 812 health professionals in the GDoH had approved incapacity leave, 47.1% of whom had more than one episode. Apart from the 2010 Public Service Commission report<sup>14</sup> and the reported challenges of incapacity leave in KwaZulu-Natal,<sup>13</sup> there are no available comparable published studies that have reported incapacity leave statistics amongst health professionals since the PILIR was adopted. An earlier South African study reported that 6% of staff at a public Free State hospital had accessed additional sick leave or temporary disability leave from 2001 to 2002.<sup>20</sup> Later, in 2009, Kruger and Joubert reported that 12% of staff at a tertiary hospital in the Free State province had applied for temporary disability leave over the three-year period, 2001–2003.<sup>12</sup> The lower proportion of health professionals who took incapacity leave in our study could be due to differences in the study periods, study populations and/or methodologies. In our study, 2016 was the beginning of a new sick leave cycle where all public sector employees would have had access to 36 days of sick leave.

The majority of incapacity leave was taken by females. Differences between males and females have also been reported in other studies in South Africa,<sup>12,14,15</sup> and in high-income countries.<sup>21,22</sup> This can partly be explained by the feminisation of the health workforce,<sup>23</sup> and the disproportionate burden of care and family responsibilities that falls on women.<sup>24</sup>

Similar to the 2009 study by Kruger and Joubert,<sup>12</sup> we found that those younger than 35 years took the least incapacity leave. A positive correlation between increasing age and sick absenteeism was also found in a Nigerian study among hospital workers, and among older nurses in a study from India.<sup>25,26</sup> Thorsen et al. (2015) suggest that the higher long-term absences among older age groups could be due to deteriorating health.<sup>22</sup>

In our study, professional nurses accounted for 41.5% of health professionals with incapacity leave approvals.<sup>12</sup> This is not surprising as professional nurses constituted 35.7% of the GDoH health professional workforce in 2016.<sup>19</sup> A study in Durban, South Africa, published in 2015, showed that frequent rotations of nurses to cover staff shortages, and unsatisfactory working conditions, contributed to high rates of general absenteeism.<sup>27</sup> Similarly, a study among Iranian nurses found that labour-intensive situations and performing multiple jobs predisposed nurses to illnesses, resulting in sickness absenteeism.<sup>28</sup>

While a Nigerian study found more frequent sickness absenteeism among health workers employed for shorter durations than among those employed for longer periods,<sup>2</sup> we did not find any significant association between duration of service and approved incapacity leave. The proportion of health professionals with approved incapacity leave was higher in central and tertiary hospitals than in any other service group. Although these facilities employ a large proportion of health professionals, our findings suggest that the relatively high rates of incapacity leave would result in fewer health professionals being available to render specialised health services in these hospitals, potentially compromising service delivery. A Kenyan study found that more health workers were absent at the larger district and sub-district facilities compared to the smaller health centres, possibly due to organisational reforms, lack of acknowledgment of efforts of individuals by their superiors, and greater bureaucracies, which are more common in larger than smaller organisations.<sup>2</sup>

The leading recorded medical reasons for incapacity leave among health professionals were mental disorders and musculoskeletal disorders. Other South African studies have also found that musculoskeletal disorders and mental disorders contribute to extended sick leave utilisation.<sup>12,29</sup> Globally, high prevalences of musculoskeletal disorders account for high rates of extended sick leave, as the resultant

**Table 2. Reasons for approved incapacity leave**

ICD-10 classification description	n	%
Mental and behavioural disorders	148	12.8
Diseases of the musculoskeletal system and connective tissue	139	12.0
Diseases of the respiratory system	102	8.8
Injury, poisoning and certain other consequences of external causes	102	8.8
Surgery	95	8.2
Diseases of the genitourinary system	92	8.0
Factors influencing health status and contact with health services	86	7.5
Neoplasms	86	7.5
Diseases of the digestive system	68	5.9
Diseases of the circulatory system	62	5.4
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	45	3.9
Diseases of the nervous system	35	3.0
Certain infectious and parasitic diseases	31	2.7
Diseases of the eye and adnexa	17	1.5
Endocrine, nutritional and metabolic diseases	17	1.5
Diseases of the skin and subcutaneous tissue	12	1.0
Diseases of pregnancy, childbirth and the puerperium	11	1.0
Diseases of the ear and mastoid process	4	0.4
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	3	0.3
All	1 155	

impairments affect productivity or performance.<sup>30</sup> There is also evidence, from Brazil, of increasing frequency of sickness absenteeism due to psychological disorders<sup>31</sup> caused by lack of organisational support, increased work demands, and the burden of caring for critically or terminally ill individuals.<sup>13</sup>

Similar to the findings from a study among Scottish health workers,<sup>32</sup> incapacity leave episodes due to mental disorders were higher among those younger than 35 years in our study. A possible explanation is that younger employees may have poorer skills to cope with stressful situations and greater workloads, than older employees.<sup>33</sup>

The highest proportion of incapacity leave episodes related to musculoskeletal disorders was for health professionals aged 45–54 years. Another South African study reported a similar mean age of nurses with incapacity leave taken for low back pain

(48 years).<sup>29</sup> Musculoskeletal disorders were also the leading reason for incapacity leave taken by health managers, physiotherapists, pharmacists and emergency medical staff. Mollazadeh et al. (2018) postulated that high proportions of sick leave related to musculoskeletal disorders among health workers could be due to occupational hazards and ergonomic risk factors, such as awkward postures, lifting or moving heavy patients, standing for long periods, increased work stress, and poor team dynamics.<sup>28</sup> A possible explanation for musculoskeletal disorders amongst health managers could be poor desk and chair ergonomics and/or prolonged periods seated in front of computers. A systematic review found that the risk factors for musculoskeletal disorders among allied health professionals were younger age, fewer years of work experience, and high levels of repetitive tasks.<sup>34</sup>

**Table 3. Unadjusted and adjusted odds ratio of approved incapacity leave among health professionals in the GDoH (N = 46 812)**

Demographic characteristic	OR	95% CI	p value	AOR	95% CI	p value
<b>Demographic characteristic</b>						
Sex						
Female	1.00 (ref)			1.00 (ref)		
Male	0.4	0.3–0.6	< 0.001	0.7	0.5–0.9	0.016
Age (years)						
< 35	1.00 (ref)			1.00 (ref)		
35 to 44	1.8	1.3–2.3	< 0.001	1.5	1.2–2.0	0.003
45 to 54	3.7	2.9–4.7	< 0.001	3.0	2.3–4.0	< 0.001
≥ 55	3.8	2.9–5.0	< 0.001	3.1	2.3–4.3	< 0.001
<b>Occupational characteristics</b>						
Years of service						
1–10	1.00 (ref)			1.00 (ref)		
11–20	1.6	1.2–2.0	< 0.001	1.0	0.8–1.4	0.734
21–30	2.5	2.0–3.2	< 0.001	1.2	0.9–1.6	0.221
≥ 31	2.2	1.5–3.2	< 0.001	1.0	0.7–1.6	0.939
Job category						
Health manager	1.00 (ref)			1.00 (ref)		
Medical staff	0.2	0.1–0.3	< 0.001	0.3	0.2–0.6	< 0.001
Professional nurses	0.8	0.6–1.2	0.288	1.2	0.9–1.7	0.282
Staff nurses	0.8	0.6–1.2	0.368	1.2	0.8–1.8	0.353
Nursing assistants	0.9	0.6–1.3	0.437	1.3	0.8–1.9	0.262
Allied health professionals	0.5	0.4–0.8	0.003	1.1	0.7–1.7	0.569
Health district						
Ekurhuleni	1.00 (ref)			1.00 (ref)		
Johannesburg	1.5	1.2–2.1	0.004	1.7	1.2–2.3	0.002
Sedibeng	2.4	1.7–3.6	< 0.001	2.2	1.5–3.2	< 0.001
Tshwane	1.4	1.0–1.9	0.030	1.3	0.9–1.8	0.134
West Rand	1.1	0.7–1.8	0.552	1.0	0.6–1.6	0.938
Service group						
Central and tertiary hospitals	1.00 (ref)			1.00 (ref)		
Regional hospital	0.7	0.5–0.9	0.007	0.7	0.5–1.0	0.068
District hospital	1.4	1.1–1.8	0.008	1.4	1.0–1.8	0.024
Specialised hospital	0.9	0.6–1.4	0.661	1.0	0.6–1.5	0.893
Primary healthcare	1.1	0.8–1.4	0.565	0.8	0.6–1.1	0.215
Other type of facility/service	0.4	0.3–0.6	< 0.001	0.5	0.4–0.7	< 0.001

OR: odds ratio; AOR: adjusted odds ratio, CI: confidence interval

The odds of approved incapacity leave among health professionals were highest for those aged 45 and older. Similar findings of increased sickness absence with age have been reported in other studies and could be related to higher job security in older employees.<sup>16,35</sup> There was a significantly increased odds of approved incapacity leave among employees in the Sedibeng and Johannesburg health districts, compared to the Ekurhuleni health district. Further research is needed to determine why these health districts were more strongly associated with approved incapacity leave than other districts.

There was a significantly lower odds of approved incapacity leave for medical staff, compared to health managers. Other studies have reported lower rates of sickness absenteeism among doctors compared to nurses and auxiliary staff.<sup>2,21,36,37</sup> This could be due to under-reporting of sickness absenteeism, early detection and self-management of illness by medical staff,<sup>21,36</sup> or lower workloads compared to nurses.

### Recommendations

Our findings provide an important baseline for examining trends in incapacity leave in the GDoH and other provincial health departments. They also demonstrate the value of analysing routinely collected information, given the cost implications of sick absenteeism.

Individual, workplace and health system factors influence incapacity leave in the workplace. Health workers should be encouraged to participate in wellness and mental health support initiatives, manage their medical conditions through appropriate disease management programmes, and actively seek assistance to cope and deal with work stressors such as high patient loads. In addition, regular workplace awareness sessions should be provided to inform health workers about workplace support and disease management programmes. Supportive supervision, workplace support groups and counselling services could assist the large proportion of health professionals who are utilising incapacity leave for mental health conditions. Newly appointed staff should be inducted and trained on leave management. Qualitative research may be necessary to explore staff knowledge on the processes involved in applying for incapacity leave, to ensure its appropriate utilisation. There should be clear guidelines and policies on interventions, such as employee wellness programmes, which cater for the health and wellbeing of health workers employed in the GDoH.

The GDoH should strive to create a gender-sensitive work environment that takes account of the needs of working women. In the long term, gender transformative policies in the health system should aim to address the underlying causes of gender inequities, which contribute to shortages of health workers.<sup>23</sup>

### Strengths and limitations

Our study had several strengths. It makes an important scholarly contribution to the discourse on incapacity leave and health workforce performance. We used electronically recorded leave data, which are considered to be more accurate than self-reported sickness absences. The latter could be influenced by recall and/or social desirability bias. Another strength is that we focused on medically certified incapacity leave for all public sector health professionals within a province, thus expanding knowledge beyond incapacity leave among nurses. While previous studies on absenteeism in the South African public health sector have focused mainly on all types of absence (including annual leave), or only sick leave, this is one of the first to explore incapacity leave.

The study was limited by the quality of routine government statistics and influenced by the completeness of data and the frequency of updating employee information. Incomplete information on PERSAL could be as a result of irregular updating of the database by department officials or the failure of employees who have been absent to submit incapacity leave applications, resulting in these leave episodes not reflecting on PERSAL.<sup>14,16</sup> Other limitations regarding the use of electronic records obtained from PERSAL are that, in the GDoH, only incapacity leave applications that have been assessed by the department and which are deemed to have met the criteria for approval are entered onto the electronic database. Furthermore, duplicate incapacity leave records were identified in the electronic database, which suggests that there are errors in the data captured.

We did not examine incapacity leave for all employees in the GDoH nor did we seek to analyse the incapacity burden over a three-year period. The study was limited to health professionals' approved incapacity leave in 2016. The selection of only one year might have introduced a bias as incapacity leave that commenced prior to 2016 but ended in 2016, and incapacity leave that commenced in 2016 but ended in 2017 onwards, was excluded.

There are differences between the context of our study and other incapacity leave studies in South Africa; hence, caution should be exercised when comparing the findings. Apart from the 2010 PSC evaluation, we could not find comparable published studies on incapacity leave. Finally, the study was restricted to health professionals employed in the GDoH and the findings may not be generalisable to health professionals in other parts of South Africa's public health service.

### CONCLUSION

Health professionals are the personification of a health system, and their performance is critical to the realisation of UHC and, ultimately, improvement in population health. This study has provided empirical information on incapacity leave among health professionals in the GDoH and has demonstrated significant associations between approved incapacity leave and demographic and occupational characteristics. These findings could facilitate improvements in the health and wellbeing of health professionals through, for example, encouraging employee participation in wellness initiatives, disease management programmes, induction and training for new employees, and positive work environments. The improved management of incapacity leave through updating of PERSAL and regular reporting on incapacity leave and associated costs is critical in light of the limited resources and sub-optimal performance of the health system in South Africa.

### KEY MESSAGES

1. There are limited quantitative studies on incapacity leave within the South African public health sector.
2. Both demographic and occupational factors influence incapacity leave among health professionals in the GDoH.
3. The leading medical reasons for incapacity leave among health professionals in the GDoH were related to mental and musculoskeletal disorders.

### AVAILABILITY OF DATA AND MATERIALS

The data used for the current study are available from the corresponding author on reasonable request.



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## DECLARATION

The authors declare that this is their own work; all the sources used in this paper have been duly acknowledged and there are no conflicts of interest.

## AUTHOR CONTRIBUTIONS

Conception and design of the study: RR, LCR, PD

Data acquisition: RR, LCR

Data analysis: RR

Interpretation of the data: RR, LCR, PD

Drafting of the paper: RR, LCR, PD

Critical revision of the paper: LCR, PD

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