Sickness presenteeism among health care providers in an academic tertiary care center in Riyadh

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\textbf{Abstract}

The term sickness presenteeism (SP) has been described as the act of going to work despite having a state of health that may be regarded as poor enough to justify sick leave. SP has been observed to be prevalent among three-quarters of health care providers (HCPs). Working while sick not only puts patients at risk but also decreases productivity and increases the probability of medical errors. Moreover, SP has been identified as a risk factor for many negative health outcomes among the HCPs themselves, such as depression, burnout, and serious cardiac events. The aim of this study was to identify the reasons for and prevalance of SP and perceptions of the impact of this practice on patient safety among HCPs. A cross-sectional study was conducted, including 279 purposively selected healthcare professionals (doctors, nurses, dentists, pharmacists and other health care professionals) working at the Ministry of National Guard Health Affairs—King Abdulaziz Medical City (MNGHA-KMCC). While nearly all of the participants (91%) believed that working while sick exposed patients to risk, the rate of SP during the past year was reported as 74%, and one fourth of respondents reported working while sick 3–4 times during the past year. More than half of the participants were not aware of the existence of a departmental policy regarding sick leave. The most common reasons reported for working while sick were not wanting to burden co-workers (71%), feelings of duty toward patients (67%), and avoiding an increased future workload caused by absence (59%). A lack of awareness regarding the existing rules and polices related to sick leave was reported by more than half of the participants. Several predisposing and enabling factors were reported as determinants influencing SP, e.g., observation of the practice of SP by peers and feelings of sympathy towards coworkers, including not wanting to overburden them, were reported to be determinants informing the decision of whether to work while sick.

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Introduction

The term sickness presenteeism (SP) has been used to describe the act of going to work despite having a state of health that is sufficiently poor to justify sick leave [1]. Working while sick has been found to be a common practice among healthcare providers (HCPs) [2]. A number of studies have shown that approximately 80% of physicians work while sick, whereas this percentage has been found to vary from 65% to 70% among other health professionals [2–5]. A study by Szymczak et al. conducted in a large children’s hospital in Philadelphia reported that 83% of HCPs had worked while sick at least one time during the past year, and 9% were reported to have worked while sick at least five times [3]. Another study conducted in New Zealand on SP reported that 82% of physicians had worked while sick [4]. In a study conducted in university hospitals in four European countries, SP was reported by 86% of Italian physicians and approximately 70%–76% of physicians in other European countries [5].

SP is an important issue to address in the hospital setting, as HCPs often interact with high-risk populations who are already sick and more likely to be immunocompromised. HCPs who work despite having ongoing symptoms of an infectious disease may extend the hazards associated with SP to the public and com-

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promise patient safety [1]. Moreover, many case reports have identified ill HCPs as vectors for the transmission of diseases such as norovirus, pertussis, methicillin-resistant Staphylococcus aureus, and influenza, in hospital settings [6–10].

Many studies have focused on preventing or reducing absences from work due to sickness; however, a very small number of studies have focused on SP, representing less than 1% of studies addressing sickness absence [11]. SP is a common phenomenon and constitutes an area that requires exploration in Saudi Arabia since it is associated with many negative outcomes [1]. Working while sick has been found to not only put patients at risk for the transmission of illness but also lead to decreased productivity and increased probability of medical errors among HCPs [12]. A study on SP conducted by Kivimäki et al. found an association between SP and an increased risk of serious cardiac events among unhealthy and distressed employees who failed to take sick leave [13]. In addition, SP may negatively affect the health care system, as it has been found to be associated with an increased likelihood of medical errors and decreased productivity and empathy towards patients among HCPs [14]. Kim et al. reported an association between SP and stress, which was shown to be inversely associated with job performance [15]. Furthermore, associations between SP and neck and back pain as well as extreme fatigue have been identified [1]. SP has been identified as a risk factor for burnout [15] and was linked to increased rates of future sickness absenteeism [16]. Several studies have reported a relationship between SP and higher rates of depression [17]. Surprisingly, economic studies have revealed that the economic cost of SP was estimated to be at least four times the cost of absenteeism [12].

Work-related factors, personal circumstances, and attitudes have been identified as some of the factors that are associated with working while sick. Work-related factors may include staff shortages, sick leave policies, difficulty finding appropriate replacements and having shift work schedules. Furthermore, people who have less control over their work tasks have been shown to have higher rates of SP [18,19].

The specific aim of this study was to identify the reasons for and prevalence of SP and perceptions of the impact of SP on patient safety among HCPs. Another objective of this study was to identify attitudes toward SP and using personal protective equipment while sick among HCPs.

Materials and methods

Study design and sampling technique

A cross-sectional survey study was conducted in Riyadh, Saudi Arabia during a one-month period in August 2015.

Sample size calculations

One of the main objectives of the current study was to estimate the prevalence of SP among HCPs in MNGHA hospitals. Prior studies have estimated the prevalence of working while sick at least one time during the past year to be between 70% and 83% [2–5]. For the purpose of our study, we assumed that the prevalence of SP was approximately 70%. Assuming a desired precision level of 5% and confidence interval of 95%, the current study required the enrollment of 278 HCP to achieve this target. We used convenience sampling to identify the study participants. Because accessing an updated electronic list of all HCPs was not permitted at the time when this research was conducted, the use of probability sampling techniques, such as simple random sampling or systematic random sampling, was precluded.

Study setting and subjects

This study was carried out at the Ministry of National Guard Health Affairs—King Abdulaziz Medical City (MNGHA – KAMC), which is a 900-bed academic tertiary care center located in Riyadh, Saudi Arabia. We included HCPs who were currently working at the MNGHA – KAMC hospitals as physicians, nurses, dentists, pharmacists or other health care specialists, such as respiratory therapists and physiotherapists, and had worked at the MNGHA – KAMC for at least one year.

Questionnaire

A survey questionnaire was designed to assess the prevalence of SP among HCPs and perceptions of HCPs regarding interventions to prevent infections. The questionnaire was adapted from previous studies [3,4]. The final instrument included 30 items addressing the following topics: demographics, self-reported frequency of working while sick, and existence of a specific departmental policy related to working while sick. In addition, it assessed reasons for not taking sick leave while ill, beliefs about the impact of working while sick on patient health/outcomes and attitudes toward SP and using personal protective equipment while sick among HCPs. The questionnaire was distributed to target HCPs who worked in the MNGHA hospitals.

Statistical analysis

Descriptive statistics were performed on data collected from the study sample. For continuous variables, data were expressed as means ± standard deviations (SDs), medians and ranges. Proportions were used to describe categorical variables. The prevalence of sickness presenteeism was evaluated and compared by demographic characteristics including age, gender, marital status, hospital department, duration of work and current designation. Categorical data were analyzed using chi-square tests. For continuous variables whose distributions approximated normality, t-tests were used for comparisons. When normality assumptions were not satisfied, non-parametric Mann-Whitney U tests were utilized. Statistical significance was defined as p < 0.05.

Ethical considerations

Ethical approval was obtained from the IRB of the King Abdullah International Medical Research Center, National Guard Health Affairs, Riyadh, Saudi Arabia. Participants consented to participate in the study before filling out the survey and could withdraw from the study at any time. The questionnaires were collected and securely stored in the principal investigator’s office.

Results

A total of 395 surveys were distributed, 279 of which were completed and returned, representing a response rate of 70%. The mean age of participants was 34.5 ± 7.7 years, and 74% of the participants were female. Of the total 279 participants, 63% were nurses, 19% were physicians, 8% were pharmacists and 5% were other HCPs. Almost two-thirds of participants had been working at the MNGHA for less than 5 years (Table 1).

Nearly all of the participants (91%) stated that working while sick exposed patients to risk; however, the rate of SP during the past year was 74%, and one-fourth of respondents reported working while sick 3–4 times during the past year. One intriguing finding was that more than half (i.e., 53%) of participants were not aware of the existence of a departmental policy related to sick leave (Table 2).
The most common reasons reported for working while sick were as follows: not wanting to burden co-workers (71%), feelings of duty towards patients (67%) and avoiding an increased future work load caused by absence (59%). More than one-third of the participants reported practicing SP because that was what their peers and coworkers were doing (Table 3).

With regards to the attitudes toward SP and the use of personal protective equipment while sick among HCPs, the majority of HCPs (81%) reported wearing a mask, washing their hands (86%), minimizing direct contact with patients (86%), covering their mouth while coughing (98%) and avoiding contact with immunocompromised patients (85%) (Table 2).

Table 4 shows the descriptive statistics and comparisons of demographic characteristics by SP status. The SP rate differed significantly by hospital department [e.g., 91% for emergency room HCPs vs. 60% for pediatric HCPs (p = 0.03, as determined by the chi-square test)]. None of the other demographic factors listed in Table 4 were found to be significantly associated with SP (p > 0.05) (Graph 1).

Discussion

SP is the opposite phenomenon of sickness absenteeism and has recently been described in the literature [18]. Many recent studies have shown that SP is a risk factor for negative health outcomes in patients and the HCPs themselves [1]. Moreover, studies have shown that the economic cost of SP is four times higher than that of absenteeism [12]. Given these physical hazards and economic losses, we performed this study to examine SP in Saudi Arabia. The aim of our study was to identify the reasons for and prevalence of SP and perceptions about its impact on patient safety among HCPs. An additional objective of our study was to identify the attitudes toward SP and use personal protective equipment while sick among HCPs. Overall, the rate of SP during the past year was reported as 74%, with 47% and 26% of respondents reporting that they had worked while sick 1–2 times and 3–4 times, respectively. The vast majority of participants believed that working while sick exposed
patients to risk (91%), while about only half of respondents were aware of a specific departmental policy related to SP. This lack of awareness about the existing rules may have influenced the high prevalence of SP observed in the hospitals. The results of post hoc analysis showed that the prevalence of SP was significantly higher among HCPs who were unaware of an existing SP policy and HCPs who indicated that such a policy did not exist (79% vs. 69% among those who reported that a policy related to SP exists; p = 0.049).

In this study, the overall prevalence of SP during the past year was 74%, which was in line with several previous studies that have reported prevalence rates between 70% and 83% [3,4]. Our data showed that the vast majority of participants stated that working while sick exposed patients to risk (91%); however, less than half of respondents were aware of a specific departmental policy. This lack of awareness about the existing rules may have influenced the high prevalence of SP observed in the hospitals. The results of post hoc analysis showed that the prevalence of SP was significantly higher among HCPs who were unaware of an existing SP policy and HCPs who indicated that such a policy did not exist (79% vs. 69% among those who reported that a policy on SP exists; p = 0.049).

This study identified that the most common reasons for SP were as follows: not wanting to burden co-workers (71%), feelings of duty toward patients (67%) and belief that absence will create a greater workload in the future (57%). These findings augment the data published in previous reports documenting that work-related factors, personal circumstances and attitudes were some of the factors influencing the decision to work while sick [1,5].

In terms of attitudes toward SP and use of personal protective equipment while being sick with an infectious illness (flu, cold, diarrhea, vomiting) among HCPs, the majority (81%) of HCPs reported wearing a mask, washing their hands (86%), minimizing direct contact with patients (86%), covering their mouth while coughing (98%) and avoiding contact with immunocompromised patients (85%).

Limitations of this study include its dependence on the ability of participants to recall events that occurred in the past, which may, unsurprisingly, have resulted in recall bias. To minimize this potential bias, we limited recall time to one year. Study participants were identified using a convenience sample, which may have resulted in selection bias. Unfortunately, because accessing an updated electronic list of all HCPs was not permitted at the time when this research was conducted, the use of probability sampling techniques was precluded.

**Conclusions**

Sickness presenteeism was prevalent among the majority of the surveyed HCPs. A lack of awareness regarding the existing rules and policies related to sick leave was reported by more than half of the participants. The influence of external enabling factors, i.e., sympathy towards coworkers and not wanting to overburden them and feelings of duty toward patients, were the most common reasons reported for coming to work while sick, which implied the upholding of high ethical standards among the HCPs at the MNGHA.

**Recommendations**

SP is a phenomenon that has been found to be associated with many negative outcomes. We should reduce the prevalence of this phenomenon to contribute to the safety of patients and HCPs.

Measures should be taken to increase awareness among employees about sick leave policies and written guidelines related to sick leave; additionally, this information should be distributed to every newly recruited staff during the orientation session. Furthermore, clear written departmental policies should be devised and implemented regarding coverage arrangements in case of absence.

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**Competing interests**

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Ethical approval

Not required.

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