The Open Public Health Journal

Content list available at: https://openpublichealthjournal.com

RESEARCH ARTICLE

Patients for Patient Safety and Inpatients' Perceptions of Safety in three Hospitals in Tshwane, South Africa

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Abstract:

Background:

It has been found that an increasing number of patients are being harmed while receiving hospital care, and many reporting models are woefully insufficient. Patients' involvement in their own safety during hospitalization has been shown to make healthcare systems safer. Their perception of safety may differ from that of health care workers, but their contribution to safety brings a different perspective. There is currently no data on patients for patient safety and their perception of safety in Pretoria's Tshwane District.

Methods:

This was a cross-sectional study using a semi-structured validated questionnaire and a calculated sample size 281. Data were analysed using both Microsoft Excel and Instat software programs. Simple descriptive statistics were employed and the results were presented in tables. Inferential statistics were calculated for the association of variables, and statistical significance was set at $p < 0.05$.

Results:

The majority of inpatients were single (184; 65.5%), and were female (163, 58%) with a secondary school education (175; 62.3%). Patients were not informed about hospital rules (205; 73%), or about the importance of wearing an identification bracelet (232; 82.6%) and the meaning of the colour-coding (271; 96.4%). They were informed about the care provided (146; 52%) and were asked to get involved in their safety (54; 54.8%). They were happy regarding issues of confidentiality and privacy (166, 59.1%). They were satisfied with their pain control (221; 78.6%).

Conclusion:

The 'patients for patient safety' principle is not effective in these institutions. Patients were unaware of the precautionary measures. Standard procedures should be established to allow inpatients to participate in safety.

Keywords: Inpatients, Participation, Safety precautions, Safety feelings, Health care, Pain.

Article History	Received: April 14, 2022	Revised: August 30, 2022	Accepted: August 30, 2022

1. INTRODUCTION

Most of the plethora of methods of patient safety measurement and reporting initiatives are uncoordinated, ambiguous, and frequently duplicative [1]. There is a considerable amount of interest in establishing novel ways of evaluating and collecting data on patient safety that are more effective and efficient [1 - 4]. This is in response to the emergent priority for patient safety is concerned as one out of every ten patients in wealthy counties is harmed while receiving medical care, with the harm originating from a combination of errors or adverse events [5]. Despite an increase in reporting, South Africa (SA) still has a relatively low rate of patient safety incidents, and they are typically serious in nature, with insufficiencies and no clear mandate for implementation transformation to ensure patient safety [6 - 8].

Inpatients are increasingly playing a part in their own safety by providing information to healthcare workers (HCWs) [1, 3, 9 - 13]. The current conception of patient safety extends beyond physical injuries to include unnecessary or excessive physical pain or emotional trauma that a patient may suffer as a result of an infringement of medical ethics (breach of confidentiality and no respect of privacy) [10]. Among many other strategies developed to improve patient safety is 'patients for patient safety', a World Health Organization (WHO) World Alliance for Patient Safety initiative [14].

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As compared to other measurements of patient safety, patients for patient safety allows patients to participate actively in their own safety management [1, 9 - 17]. One could argue that there is a gap between the quality of information supplied by patients on their safety experiences and the documentation or reporting of safety occurrences by HCWs [11]. Furthermore, the fact that patients' experiences of safety vary among themselves [13, 15] widens this gap even further. Yet, this provides a more diverse approach and impression of safety than the medical one. As a result, healthcare providers have turned their attention to the role of patients in their own safety. So, to expect trustworthy information from inpatients, it is thought that they should be requested to participate in their own safety upon admission, be given information on rules and then briefed on the safety measures, such as the significance of wearing a colour-coded bracelet. During their hospital stay, patients will be allowed to have an open mind about safety issues. Based on personal experience and information offered by HCWs, they may assess the quality and amount of safety received upon entrance. There is a clear connection between patient experience of safety and therapeutic safety efficacy. In other words, the more efficient medical safety is, the more secure patients feel during their hospitalisation [16]. Action on this aspect will not only strengthen dialogue on better patient care, but will also advance the variety of innovative reforms and policies needed to ensure that quality, efficiency and patient safety are at the heart of the healthcare systems [17]. The majority of patients come in for pain (discomfort, *etc*.) and the doctor will identify it after an examination. The link between safety and pain can be established in the following way: if the patient's pain is not controlled, it may indicate that the treatment is insufficient, and the patient may fear for their life or complications, making them feel unsafe.

Prior to 2014, there were no national data on the occurrence of patient safety incidents at public hospitals. That motivated the National Department of Health to undertake a thorough assessment of the situation and implement policies [18]. Currently, the number of documented incidences is on the rise across the country, which may reflect a robust reporting culture rather than a less safe environment for patients [18]. The majority of the incidents were classified as major harm [6]. Despite the mandate and regulations, most reports still lack templates for gathering statistical data that include patient participation in their own safety [7, 8]. The current study aimed to determine the effectiveness of 'patients for patient safety', by assessing inpatients' awareness and involvement in their own safety and possible associations in three hospitals in Tshwane to add to the body of knowledge on the subject in the study setting.

2. MATERIALS AND METHODS

This was a cross-sectional study conducted in three primary healthcare facilities in two Tshwane sub-districts. Inpatients from three different facilities made up the study population. We used a semi-structured validated questionnaire from a previous study [10]. Two separate researchers piloted the questionnaire in two different settings, and their comments were used to strengthen the questionnaire based on the local context.

This study was multicentre research conducted in three primary health care facilities. Hospital 1: the first one was the Dr. George Mukhari Academic Hospital, a tertiary medical centre in the Gauteng Province neighbourhood of Ga-Rankuwa. It serves as the training hospital. It has 39 wards that are grouped together based on clinical specialties [19]. Our research was restricted to ward 35, which admits patients for level one or primary healthcare. Ward 35 is assigned 40–50 beds (88 percent bed occupancy).

Hospital 2: the second facility was Jubilee District Hospital (JDH), a 551 authorised bed level one hospital, with 300 additional beds approved due to the Covid-19 pandemic (94 percent bed occupancy). JDH is located in Hamanskraal, Gauteng Province, north of Pretoria. It provides a variety of services of primary health care and employs some specialists including orthopedists, pediatricians, family physicianss, psychiatrists, and obstetricians [20].

Hospital 3: the third facility was Odi District Hospital (ODH), a 270 authorised bed hospital (98 percent bed occupancy). It is a level one hospital that provides care to residents of North West and Gauteng provinces. It is situated in the province of Gauteng, in Mabopane, north of Pretoria. Only family doctors are employed there as specialists, and it offers a variety of primary healthcare services [21].

The sample size was calculated at 281, based on the 1050 bed occupancy acquired from the three hospitals at the time the study protocol was designed, using an estimated 95% confidence level and 5% confidence interval [22]. A pro rata of inpatients were estimated from the sample size as a fraction of the combined bed occupancy (281/1050 = 0.268) in order to obtain a representative sample derived from the three institutions. To determine the sample size per hospital, a table of random numbers was used and participants with the selected numbers were approached. Each potential participant was informed of the study's objectives before being asked to participate. When a participant declined to participate, a new number was drawn randomly, and the recruitment procedure was repeated until the study's sample size was reached.

The authors used a semi-structured and validated questionnaire from a previous study [10] to investigate aspects of patient safety as expressed through their feelings during hospitalisation, such as the information given to patients on admission about safety, adverse events and subjective pain management throughout their stay. The above were split among 20 elements with dichotomous responses, such as 'Yes' or 'No', as well as 5- and 7-point Likert scales. The baseline characteristics of the admitted patients were also included in the questionnaire. Before taking part, each participant signed an informed consent form.

Data were analysed using both Microsoft Excel and Instat® software programs. Simple descriptive statistics were employed and the results are presented in tables. Inferential statistics were calculated for the association of variables using Fisher's exact test and statistical significance was set at $p<0.05$.

This study is part of the project 'An evaluation of the safety of admitted patients and healthcare professionals in the primary healthcare facilities of Tshwane District 1 and 2'. We

obtained written consent to participate in the study from each participant, as well as assent from minors and their guardians or parents. Permission to conduct this project was obtained from the Chief Executive Officers of the three hospitals. Ethics approval was obtained from Sefako Makgatho Health Sciences University Research and Ethics Committee (Clearance number: SMUREC/M/197/2019:IR) and from the Tshwane ethics committee (NHRD reference number GP_202001_048) before the commencement of the project.

3. RESULTS

We analysed the data collected to assess the awareness and involvement of inpatients in their own safety, the frequency of inpatients reporting adverse events during the study period, and the inpatients' perception of safety in order to assess the effectiveness of "patients for patient safety." Additionally, in order to look for potential associations, we performed a secondary analysis on the primary results.

3.1. Baseline Characteristics

The age group of 24-33 years was represented by the majority of participants (65; 23.1%), followed by that of 34-43 years (61; 21.7%). Patients had a primary school education in the majority (184; 65.5%), were mostly single (163; 58%), and were mostly female (163; 58%). (Table **1**) contains more detailed findings of patients' baseline characteristics.

3.2. Awareness of Safety and Inpatients Involvement in their Own Safety

Our research revealed that the majority of participants (205; 73%), were not informed of the significance of wearing an identification bracelet (232; 82.6%), and said that they were not told that the ID bracelet had a colour code and what that colour code meant (271; 96.4%). A little more than half of the patients (146; 52.0%) reported that they were informed about the care given, and 154; 54.8% reported that they were requested to participate in their own safety. 166 (59.5%) patients felt that their privacy and confidentiality were guaranteed. (Table **2**) provides more results in greater details on awareness of safety and inpatients involvement in their own safety.

Table 1. Baseline characteristics (n = 281).

Characteristics	Frequency	Percentage
Age (Years)		
14–23	36	12.8
24–33	65	23.1
34–43	61	21.7
44–53	41	14.6
54–63	33	11.7
64–73	32	11.4
≥74	13	4.6
Gender		
Female	163	58
Male	118	42
Facilities		
Hospital 1	13	4.6
Hospital 2	161	57.3
Hospital 3	107	38.1
Marital Status		
Single	184	65.5
Married	57	20.3
Widow	20	7.1
Widower	17	6.0
Level of Education		
No formal education	31	11
Primary school	54	19.2
Secondary school	175	62.3
Tertiary	21	7.5

Table 2. Awareness of safety and inpatients involvement in their own safety per hospital.

Questions	Yes n (%)	No n (%)
Did the HCWs inform you about hospital rules regarding patient safety?		
Hospital 1	6 (50.0)	6 (50.0)
Hospital 2	58 (32.0)	113 (68.0)
Hospital 3	12 (12.2)	86 (87.8)
TOTAL	**76 (27.0)**	**205 (73.0)**

(Table 2) contd.....

Questions	Yes n (%)	No n (%)
Did the HCWs inform you about the reason for wearing an ID bracelet?		
Hospital 1	3 (25.0)	9 (75.0)
Hospital 2	41 (24.0)	130 (76.0)
Hospital 3	5 (5.1)	93 (94.9)
TOTAL	**49 (17.4)**	**232 (82.6)**
Did the HCWs inform you of the precautionary measures regarding the colour code of the ID bracelet?		
Hospital 1	1 (8.3)	11 (91.7)
Hospital 2	6 (3.5)	165 (96.5)
Hospital 3	3 (3.1)	95 (92.9)
TOTAL	**10 (3.3)**	**271 (96.4)**
Were you satisfied with the information you received about care given to you?		
Hospital 1	9 (75.0)	3 (75.0)
Hospital 2	122 (71.3)	49 (28.7)
Hospital 3	15 (8.8)	83 (91.2)
TOTAL	**146 (52.0)**	**135 (48.0)**
Did the HCWs ask you to become involved in your own care?		
Hospital 1	8 (66.7)	4 (33.3)
Hospital 2	115 (67.3)	56 (32.7)
Hospital 3	31 (31.6)	67 (68.4)
Total	**154 (54.8)**	**127 (45.2)**
During your hospital stay, did the HCWs ensure your confidentiality and privacy?		
Hospital 1	7 (58.3)	5 (41.7)
Hospital 2	72 (39.8)	99 (60.2)
Hospital 3	77 (78.6)	11 (21.4)
Total	**166 (59.1)**	**115 (40.9)**

Note: n: frequency; %: percentage.

Our findings indicated that even though 146 (52%) of patients were satisfied with the information they obtained about the care they received, patients with secondary and tertiary education had a satisfaction percentage below 50, with 24 (44.4%) and 4 (19%), respectively. Similarly, when asked if 'HCWs ensured your confidentiality and privacy', patients with no formal education scored differently, with only 15 (48.4%) satisfied, while, in general, 166 (59.1%) were satisfied, with percentages ranging from 52 to 100 percent in other categories.

The majority of the participants, regardless of their level of education, reported that they were not informed them about the hospital rules regarding patient safety (205; 73.0%). Table **3** more details on the above findings

Table 3. Awareness of safety and inpatients involvement in their own safety and level of education.

Questions	Yes n (%)	No n (%)
Did the HCWs inform you about hospital rules regarding patient safety?		
No formal education	10 (32.3)	21 (67.7)
Primary school	44 (25.1)	131 (74.9)
Secondary school	19 (35.2)	35 (64.8)
Tertiary	3 (14.3)	18 (85.7)
Total	**76 (27.0)**	**205 3.0)**
Did the HCWs inform you about the reason for wearing an ID bracelet?		
No formal education	3 (9.7)	28 (90.3)
Primary school	31 (17.7)	144 (82.3)
Secondary school	13 (24.1)	41 (75.9)
Tertiary	2 (9.5)	19 (90.5)
Total	**49 (17.4)**	**232 (82.6)**
Did HCWs inform you of the precautionary measures regarding the colour code of the ID bracelet?		
No formal education	1 (3.2)	311 (96.8)
Primary school	5 (2.9)	170 (97.1)
Secondary school	3 (5.6)	51 (94.4)
Tertiary	1 (4.8)	20 (95.2)
Total	**10 (3.3)**	**271 (96.4)**
Were you satisfied with the information you received about the care given to you?		
No formal education	16 (51.6)	15 (48.4)
Primary school	96 (54.9)	79 (45.1)
Secondary school	24 (44.4)	30 (55.6)
Tertiary	4 (19.0)	17 (81.0)
Total	**146 (52.0)**	**135 (48.0)**

(Table 3) contd.....

Questions	Yes n (%)	No n (%)
Did the HCWs ask you to become involved in your own care?		
No formal education	16 (51.6)	15 (48.4)
Primary school	98 (56.0)	77 (44.0)
Secondary school	32 (59.3)	22 (40.7)
Tertiary	154 (54.8)	127 (45.2)
Total	**154 (54.8)**	**127 (45.2)**
During hospital stay, did the HCWs ensure your confidentiality and privacy?		
No formal education	15 (48.4)	16 (51.6)
Primary school	92 (52.6)	83 (47.4)
Secondary school	38 (70.4)	16 (29.6)
Tertiary	21 (100.0)	
Total	**166 (59.1)**	115 (40.9)

n: frequency; %: percentage.

3.3. Adverse Events

According to the analysis of the data on advert events, 22 out of 281 patients reported experiencing some of the potential advert events listed on the data collection sheet while they were hospitalized, resulting in an incidence of 7.8%. The most frequent adverse event in this study was fall (10: 45.5%) followed by infection (5: 22.7%). More data is available in Table **4**.

3.4. Perception of Safety Among Inpatients

The analysis of inpatients' perceptions of safety revealed that 218 of them (77.6%) generally felt secure. However, when the results were broken down into different categories, it was found that inpatients with tertiary education had relatively the lowest satisfaction levels (71.4) and those without a formal education had the highest (83.9%). Table **5** gives more details on inpatients perception of safety

In terms of pain management, we noticed that 221 (78.6%) of inpatients were satisfied with their pain management. Hospital 1 inpatients had the lowest level of satisfaction with pain control (50%) and those without a formal education had the highest (83.9%), according to analysis done by different categories. More information on pain control satisfaction is provided in Table **6**.

Table 4. Adverse events during hospitalisation (n=22).

Adverse events	n (%)
Allergy	4 (18.2)
Fall	10 (45.5)
Identification confusion	1 (4.8)
Infection	5 (22.7)
Pressure sore	1 (4.5)
Wrong medication	1 (4.5)

n: frequency; %: percentage.

Table 5. Inpatients perceptions of safety.

	Felt safe during hospitalisation n (%) 218 (77.6)	Felt unsafe during hospitalisation n (%) 63 (22.4)	p-value
Facilities			0.045
Hospital 1	9 (75.0)	3 (25.0)	
Hospital 2	141 (82.5)	30 (17.5)	
Hospital 3	68 (69.4)	30 (30.6)	
Education			0.447
No formal education	26 (83.9)	5 (16.1)	
Primary school	132 (75.4)	43 (24.5)	
Secondary school	45 (83.3)	11 (16.7)	
Tertiary	15 (71.4)	6 (28.6)	
Gender			0.772
Female	93 (78.8)	25 (21.2)	
Male	125 (76.7)	38 (23.3)	
Age (years)			0.8909
≥43	121	41	
<43	88	21	

n: frequency; %: percentage

Table 6. Satisfaction with pain control.

Variables	Satisfied n (%) 221 (78.6)	Unsatisfied n (%) 60 (21.4)	p-value
Facilities			0.004
Hospital 1	6 (50.0)	6 (50.0)	
Hospital 2	144 (84.2)	27 (15.8)	
Hospital 3	71 (72.4)	27 (21.6)	
Education			0.568
No formal education	26 (83.9)	5 (16.1)	
Primary school	140 (80.6)	35 (19.4)	
Secondary school	40 (74.1)	14 (25.9)	
Tertiary	15 (71.4)	6 (28.6)	
Age (years)			0.7686
≥ 43	126	36	
<43	95	24	

Note: n: frequency; %: percentage

Table 7. Awareness of safety measures, adverse events versus patient's safety perception.

Variables	Yes	p-Value	CI(95%)
Awareness of safety measures			
Hospital rules regarding patient safety	63	0.2589	0.7250 to 0.9056
Reason of wearing an ID bracelet	46	<0.0021	0.6804 to 0.7963
Precautionary measures regarding the colour of the ID bracelet	9	0.4659	0.7171 to 0.8194
Satisfaction with the information received about care	93	0.1936	-0.03205 to 0.1666
Request to become involved in your own care	85	0.4624	-0.05874 to 0.1425
Confidentiality and privacy ensured	86	0.0299	0.01575 to 0.2128
Adverse events			
Fall	8	1.000	0.7201 to 0.8234
Infection	2	0.5345	0.7238 to 0.8242
Pressure sore	1	0.4018	0.7225 to 0.8232
Allergic reaction	2	0.0764	0.7290 to 0.8298
Identification confusion	1	1.000	0.7215 to 0.8226
Wrong medication	1	0.4018	0.7225 to 0.8232
Satisfaction with pain control	25	< 0.0001	0.3376 to 0.5757

Note: CI: confidence interval.

3.5. Awareness of Safety Measures versus Patient's Safety Perception

The secondary analysis of the data revealed that perception of safety was associated with reasons for wearing an ID bracelet (p-value: <0.0021), confidentiality and privacy (p-value: 0.0299), and satisfaction with pain management (p-value: <0.0001). (Table **7**) contains additional information on the secondary analysis.

4. DISCUSSION

In addition, we conducted a secondary analysis of the initial findings to search for potential associations.

This study related awareness of safety measures, adverse events and perception of safety among inpatients on admission, adverse events during hospitalisation that were reported by patients, satisfaction with pain control, and safety perceptions of patients regarding care given by HCWs at three district hospitals in Tshwane, SA.

4.1. Awareness of Safety Measures During Admission

Our research showed that the majority of inpatients were unaware of hospital safety regulations (73.0%), as well as the purpose of wearing an ID bracelet (82.6%) and the color-coding system for ID bracelets (96.4%). The results of these three variables are not in line with some literature [10, 16]. They are unsettling, and they will need a comprehensive understanding and in attempt to understand these figures, the authors identified two factors. The potential timeframe of the delivery of patient safety measure information is the first point to mention. The three above-mentioned variables are meant to be discussed with patients upon admission. When HCWs deliver safety information, patients may be completely preoccupied with other issues during admission, such as the pain and discomfort that brought them to the hospital, preventing them from taking in any information given by HCWs when delivering safety information. Makoko and colleagues [23] found that pain and discomfort could divert patients' attention away from the critical information provided by HCWs. Some- been researches have been conducted on the importance of patient information and how it relates to their satisfaction [23, 24]; however, the timing of delivery of this information during their stay was never reported, and it could have made a difference in asserting our argument. The fact that other information discussed with inpatients during their stay, not just upon admission, had a different score supports our argument. Patients admitted informed about care (52.0%), requested to become involved in their own care (54.8%) and admitted that their confidentiality and privacy were ensured

(59.1%). This clearly demonstrated a distinct pattern, albeit one that was relatively low in comparison to previous findings in the literature [10, 16]. Morris and colleagues [4] emphasized the need for effective patient-clinician communication as a fundamental element of involving patients in their own safety when creating a patient safety guideline for primary care. This should enhance the quality and quantity of data sources for potential safety intelligence that can be used to improve services [13]. Particularly in SA, where patient safety incidents are rarely reported and nearly every case characterizes serious damage [6, 7].

The second point to mention is the consistency of the safety information provided to patients. These may not have been adequately shared with patients, or their provision may not have been a routine and consistent protocol in all three hospitals. Mgobozi and colleagues [7] argued that South African hospitals needed active change management to create a learning environment from patient safety incidents, improve patient reporting, implement comprehensive quality improvement interventions, and inculcate a blame-free culture. Furthermore, giving patients instructions on protective precautions during admission is considered nursing practice only in the majority of these hospitals. The question is, why are nurses the only ones who provide safety measure information, and why are medical doctors not involved in patient safety education? This could be just the tip of the iceberg in terms of how dysfunctional hospitals are when it comes to patient safety, as reported by Mayeng and colleagues [8] previously while assessing and describing patient safety culture among staff at a National District Hospital in South Africa.

4.2. Unreported Adverse Events During Hospitalisation

An adverse event is described as any untoward injury caused by HCWs that happens during treatment. It may be fatal, life-threatening, cause permanent significant disability or require prolonged hospitalisation [25]. In our study, 7.8% of admitted patients had unreported reported adverse events. Falls were reported most, followed by infections. Previous research has looked at adverse events from the medical perceptive, focusing on recognised medical errors and/or patients' complaints or lawsuits. That left other patients, whose adverse events were unreported, dissatisfied if they were not recognised by HCWs [12]. As with vulnerable patients such as the elderly, safety injuries more frequent or significant in those with comorbidities [26, 27], and such patients are often the least likely to complain [12]. It is fair to claim that the occurrence of adverse events and their accuracy as reported by patients will not be consistent with those identified by HCWs from medical reports; however, patients' reports provide an additional source of evidence on patient safety [13]. At the time that we collected data, we did not look for evidence of any adverse events reported by HCWs in the three facilities to corroborate patients' reports. However, this could be a valuable contribution to health safety, and an opportunity for the district to improve its safety measures.

4.3. Perceptions of Safety Among Inpatients

Our results indicated that patients were not aware of many of the safety measures that they were supposed to be told about by HCWs. Nevertheless, most patients were satisfied with their pain control (78.6%) and felt safe during their stay in the hospital (77.6%). This brings to the fore the differences in medical personnel and patients' perception of safety. The fact that they did not have the information about safety did not make a difference regarding their feeling of safety during hospitalisation. This should not be looked at as a contrast, but more as a gap between two different views on patients' safety as reported in the literature [13], which need to be as close as possible to improve patient safety and satisfaction. HCWs perceive the following as common patient safety concerns: falls, healthcare-associated infections, laboratory errors, medication errors, misdiagnosis, patient identification and communication errors, surgical errors, postoperative complications and many others [28]. Current evidence suggests that more local contextualisation, and conceptualisation and prioritisation of patients' safety must be taken into account [4, 7].

4.4. Awareness of Safety Measures, Adverse Events versus Patient's Safety Perception

We found that patients' perceptions of safety were associated with specific safety measures, the guarantee of privacy and confidentiality, and satisfaction with pain management. As much as these are not causally related, it brings up the issue of the discrepancy between what patients perceive as safe and HCW concerns about patient safety once more [11, 13, 15]. By providing inpatients with high-quality safety education, this gap can be closed [4, 13].

4.5. Study Limitations

In South Africa, public sector healthcare facilities are frequently chastised. Our study's findings were indeed based solely on participants' self-reported accounts, which may have been subjected to confirmation bias. This refers to participants' tendency to pay more attention to information that confirms their pre-existing beliefs and thus what they already think or believe [29]. Furthermore, we collected data while patients were still in the hospital. There could have been a tendency to avoid exposing HCWS or to try to please them. As a result, the findings of the current study were limited by the aforementioned factors.

CONCLUSION

The study has demonstrated that inpatients at the three hospitals were unaware of precautionary measures, namely hospital safety standards, the rationale for wearing an ID bracelet and the significance of the ID bracelet colour codes. A few of them were asked to join forces with the HCWs, reporting any incident. Consequently, the "patients for patient safety" principle, developed in 2004 to allow patients to actively participate in their own safety management, was ineffective in these hospitals. Since the inpatients were unaware, they were unable to effectively take part in their own protection. The study also demonstrated that there were disparities in the awareness between HCWs and inpatients regarding the feeling of safety in the hospitals. The 22 incidents that were not reported by inpatients to HCWs were a missed opportunity to improve and ensure the safety of the

inpatients. The current study shed light on the feasibility of additional data sources for incidences during admission. Patients' pain management satisfaction and safety expectations may not be an accurate reflection of their understanding of their own protection against any incident, which can be a barrier to their involvement.

RECOMMENDATIONS

Based on the current study findings, we would like to recommend the following:

- Providing safety information should be a standard procedure in all medical facilities admitting patients in the district. This information must not only be given to patients on admission, but also be repeated throughout their stay in the hospital – by both HCWs and the display of posters on the hospital walls;
- Initiation of a standard procedure to collect data on adverse events, pain management satisfaction and safety expectations of admitted patients should be instituted.

AUTHOR'S CONTRIBUTION

DKN designed the project, the main conceptual ideas and the proof outline. DKN, MPPS, TB collected the data. Both DKN and TB analysed the data. All the authors contributed to the final version of the manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethics approval was obtained from Sefako Makgatho Health Sciences University Research and Ethics Committee (Clearance number: SMUREC/M/197/2019:IR) and from the Tshwane Ethics Committee (NHRD reference number GP_202001_048) before the commencement of the project.

HUMAN AND ANIMAL RIGHTS

No animals were used for studies that are the basis of this research. All the humans were used in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013 (http://ethics.iit.edu/ecodes/node/3931).

CONSENT FOR PUBLICATION

All participants signed the informed consent form before taking part.

STANDARDS OF REPORTING

STROBE guidelines were followed in this study.

AVAILABILITY OF DATA AND MATERIALS

Not applicable.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare no conflicts of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

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