ARTICLE

STUDENT NURSES' PERCEPTIONS OF DISTRICT HOSPITAL RESOURCE ADEQUACY FOR AGGRESSION MANAGEMENT OF MENTAL HEALTH CARE USERS

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ABSTRACT

South African legislation requires an initial 72-hour observation period of the mental health care user (MHCU) in a district hospital. The purpose of the study was to describe third year Bachelor of Nursing (BN) students' perceptions of resource adequacy for aggression displayed by mental health care users (MHCU) in this observation period, in order to inform education and policy development. The research design was a non-experimental quantitative descriptive design, using a two-part self-administered questionnaire, involving third year BN students allocated to district hospitals. Section A comprised demographic data; Section B was a subscale (resource adequacy) adopted with permission from the Behavioural Health Care Competency Survey (BHCC). Data was analysed using SPSS version 22. The students (n=31) were seen as a vulnerable group yet conceptualised aggression management resources as adequate. The resource adequacy mean was 12.26 (Standard deviation = 2.96) out of a possible score of 16. The majority of students felt they knew when to call for help despite not having received mental health education. Younger females (19–22 years) were at higher risk of

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encountering aggression, with night duty having a greater incident rate. There was no association between the demographics, nursing a MHCU, harmed by or threatened by MHCU, shift of the incident and resource adequacy. The students' perception of resource adequacy is concerning, suggesting a need for the introduction of management of aggression in MHCU (especially assessment) in the first year of studies, as well as district hospitals re-examining safety protocols regarding the needs of student nurses.

Keywords: aggression, mental health care user, resource adequacy, student nurses

INTRODUCTION AND BACKGROUND

The United Nations' *Universal Declaration of Human Rights* was set by the World Health Organization (WHO) in 1949 (WHO, 2005:3). This declaration was intended to address all human rights inclusive of the mental health care user (MHCU), and in accordance some countries recognised this through promulgation of legislation (Burns, 2011:101; Ramlall, Chipps and Mars, 2010:669; WHO, 2005:1; 2013:8). However, it was not until 2002 that South Africa followed when the *Mental Health Care Act, No. 17 of 2002*, replaced the *Mental Health Act, No. 18 of 1973* (Burns, 2008:48; 2011:104).

In order to provide care, treatment and rehabilitation of the MHCU, the route of care delivery progresses from primary health care to community health centre and then to select district hospitals for 72-hour observation and ultimately, if necessary, tertiary specialist hospitals (Burns, 2008:47). *The National Health Act, No. 61 of 2003* mandated that district hospitals allocate two per cent of beds for the MHCU requiring 72-hour observation (Burns, 2008:48), which required increased facilities (Ramlall *et al*., 2010:668).

Unfortunately, the services have not always been able to meet these legislated requirements involving the introduction of the 72-hour observation and admission unit, with the outcome of inadequate structures to cater for the needs of the MHCU (Peterson and Lund, 2011:751). As a result, MHCUs are admitted into the general medical units (Lund *et al*., 2010:397). The inadequacies of structures can be problematic as it has been identified that the first 72 hours post admission is when the MHCU is most likely to engage in some form of physical violence (Newton *et al*., 2012:206).

The WHO (2002:13) defines violence as when a person intends using physical force to threaten or harm (emotionally or physically) another person, or even cause death. Conceptually, violence is often used interchangeably with aggression in MHCU, and has been noted to be high in international and local health care settings (Chukwujekwu and Stanley, 2011:16; Pompeii, Dement, Schoenfisch *et al*., 2013:583; Steinman, 2003:23). The increase in violence affects the safety of the staff

and patients alike and can pose as overwhelming challenges in units where the staff members do not have the required competencies (Rutledge *et al*., 2012:3).

A lack of knowledge and skill, in particular by the less experienced nurse, can exacerbate the situation (Edward *et al*., 2014:655; Rutledge *et al*., 2012:2). Student nurses prior to their mental health care training are not equipped with this specialised knowledge on aggression management, with Beech (2008:95) arguing that this makes them a higher risk for incidents of violence. Further contributors to the vulnerability of the student nurse are being female and young (accompanied by less experience) (Edward *et al*., 2014:656), the time of day (especially night duty) (Shiao *et al*., 2010:827), and lastly, lack of understanding and ability to recognise an adverse event (Moumtzoglou, 2010:543).

The student's utilisation of resources can serve to mitigate against their vulnerability to aggression. Resources available to the nurse can be the use of de-escalation, aggression management protocols (Beech, 2008:101) or aggression prediction tools such as the Broset Violence Checklist (Chu *et al*., 2013:274; Rutledge *et al*., 2012:2). The use of resources can allow for early identification of aggression and can reduce the rate of aggression (Chu *et al*., 2013:274; Rutledge *et al*., 2012:2). After identification of a need for assistance, structures need to be in place to respond to calls for help, preventing a sense of powerlessness in the situation identified as one of risk (Rutledge *et al*., 2012:3; Roche *et al*., 2010:19).

Student nurses (particularly females), as young, inexperienced providers of care to the MHCU admitted for observation, are vulnerable and at higher risk of acts of aggression, possibly unable to recognise or report these acts, thus needing the availability of structures to call for assistance (Moumtzoglou, 2010:543). Added to this is working night duty where it has been shown that nurses felt more vulnerable to acts of aggression (Shiao *et al*., 2010:823).

STATEMENT OF THE RESEARCH PROBLEM

Despite recognition of the human rights of the MHCU in the *Mental Health Care Act No. 17 of 2002*, mental health care resources in district hospitals are suggested to be inadequate to meet the needs of the MHCU who is potentially aggressive or who is exhibiting aggression (Burns, 2008:48; Burns, 2011:100). The MHCU is at times nursed in general ward settings (Burns, 2008:48), where the student nurse is allocated for engagement in clinical experience. The inadequacy of mental health care resources for risk assessment and management of aggression is problematic as current research suggests that nurses, in particular student nurses, are a population group at risk for acts of violence by MHCUs (Beech, 2008:95), which can be coupled by a decreased likelihood of the recognition and reporting of aggression (Beech, 2008:95; Moumtzoglou, 2010:543). The vulnerable position of the student nurse highlights the significance of this study to ameliorate nursing education such that the

neophyte is prepared for aggression assessment and management. The study offers the possibility for policy changes at district hospitals to ensure resource adequacy, inclusive of risk assessment tools, and lastly it can add significance for further nursing research in this area.

RESEARCH OBJECTIVES AND QUESTIONS

Purpose*:* This study seeks to inform nursing education and district hospitals about student nurses' perceptions of resource adequacy for aggression management in MHCU.

Research objective: To describe Bachelor of Nursing (BN) third year students' perceptions of resource adequacy for assessment of aggression risk of MHCU admitted for 72 hour observation in district hospitals.

Research questions: Four questions were asked regarding the extent of the third year BN students' perceptions of resource adequacy for aggression in MHCU admitted for 72 hour observation:

- To what greater or lesser extent do third year BN students' conceptualise resources for aggression in MHCU admitted for 72 hour observation to be adequate?
- To what greater or lesser extent are the third year BN students concept of resource adequacy for aggression in MHCU admitted for 72 hour observation associated with demographic variables?
- To what greater or lesser extent is the third year BN students' concept of resource adequacy for MHCU admitted for 72 hour observation associated with working night shift?
- To what greater or lesser extent are the third year BN students' concept of resource adequacy for aggression in MHCU admitted for 72 hour observation associated with acts of aggression

DEFINITIONS OF KEYWORDS

The following terms were operationalised for the study:

Aggression assessment is the assessment of aggression risk in the MHCU using a well validated and reliable aggression prediction tool.

Resource adequacy is the availability of resources that Bachelor of Nursing third year students feel they can access with ease to allow for efficient and effective management of an aggressive or potentially aggressive MHCU admitted for 72 hour

observation (BHCC resource adequacy subscale score range 4 (inadequate) to 16 (very adequate))

Student nurse refers to students registered for a Bachelor of Nursing degree at the select university, in their third year of study.

RESEARCH METHODOLOGY

The study was framed within the Donabedian (1988) tripartite model, focusing on the structure and process standards. Outcome standards were not evaluated through interviewing the MHCU to identify his/her experience (subject of another study), neither were hospital records of reports of violence or aggression examined, but acts of aggression against the nurse were measured.

Research design

A non-experimental quantitative research design was selected, involving a self-administrated questionnaire, written in English, involving third year Bachelor of Nursing students. In an attempt to decrease social desirability, to increase the possibility of participation as well as allow for anonymity given that practice competencies were to be questioned a self-administered questionnaire was used.

Research setting

The study was conducted at a South African university, which is accredited by the South African Nursing Council (SANC). The current curriculum requires clinical practice in the hospital settings – private or district hospitals in first, third and fourth years. Limited time is spent in the hospitals in the first year. Third year is predominantly spent in the general wards, inclusive of casualty and night duty. It is only district hospitals that admit MHCU for 72 hour observation to either the medical or the psychiatric wards as dictated by beds available, with first choice being the psychiatric ward. It is in these settings that the third year student gets to nurse the MHCU. Psychiatric nursing is studied in the fourth year. Of note is that aggression assessment was intuitive in all three hospitals and did not involve an aggression prediction tool.

Study population and sampling

Convenience sampling was used to select the university. The third year students were purposively selected from the four years of the Bachelor of Nursing programme, as they were working in the general wards and the first year students who spent limited time in the wards had not yet been allocated to the wards at the time of the study.

The respondents were third year undergraduate student nurses (N=38) who had been allocated for clinical experience to three urban district hospitals and all were invited to participate.

Data collection instrument

A two-part questionnaire was used. Section A covered demographic characteristics, Section B with contact with aggression and shift allocation, with a subset of questions on Behavioural Health Care Competencies (BHCC). The BHCC was framed within the Hospital Nurse Behavioural Healthcare Competency Conceptual Model, with content validity obtained through advanced psychiatric-mental health nurse, clinical educator with expertise in the select area and three nurse educators (Rutledge *et al*., 2012:4). Principal component analysis with varimax rotation led to the factor structure, which was supported by Eigenvalues greater than 1. The BHCC was used to assess the behavioural health care competency of postgraduate hospital nurses *(n*= 884), who worked in general or non-psychiatric units, with regards to management of aggressive behaviour associated with mental illness (Rutledge *et al*., 2012:3). The authors of the scale reported good construct validity, and for the resource adequacy sub-scale a Cronbach's alpha coefficient of 0,78, which indicated adequate internal consistency. The mean score was 3.75 (*sd* 0.67), indicating moderate inclination to approach an aggressive MHCU (Rutledge *et al*., 2012:7). The subscale was selected as opposed to the full scale due to the researcher's focus on examining student nurses' perceptions of the adequacy of resources in relation to 72 hour admission of MHCU. The researcher of this study obtained face validity for the questionnaire from a psychiatrist employed at a select district hospital and content validity from the literature.

Data collection

Research ethical principles were upheld (Emmanuel *et al*., 2004:932). Gatekeeper's permission was obtained from the registrar of the university and ethical clearance from the university's ethics committee (HSS/1226/014H). Prior to obtaining signed consent, potential respondents were provided with an information sheet and an explanation of the study. Data collection occurred on 21 October 2014 in a single meeting of the respondents on campus. It took on average five minutes for each respondent to complete the questionnaire.

Data analysis

Data were cleaned and entered into SPSS version 22. A Likert scale was used to score the subscale with a higher score indicating a higher BHCC (Rutledge *et al*., 2012:4). To allow for easier reporting, the respondents' age was re-coded into

different variables, namely younger (19-22 years) and older (23-34 years), with a mean age of 22 years used as a cut-off point.

Results

There was an 81.6% (n=31) response rate. The majority of respondents were females (87.1%) and had a mean age of 22 years (*sd* 2.96), being significantly younger (p=.038) than the males (mean=26 years, *sd* 5.56). The ages ranged from 19 years to 34 years (mean 22 years, *sd* 3.3 years) (females:19 to 33 years; males 22 to 34 years). The majority of respondents *(n*=21, 68%) had nursed an MHCU, with an even distribution between the younger and the older respondents.

Resource adequacy contained four questions (know when to ask for help, uses outside resources, confident help is available, hospital resources available) that all 31 respondents answered, suggesting them to be adequate for third year Bachelor of Nursing students (see Table 1: Resource adequacy responses (*n*=31)).

Table 1: Resource adequacy responses (n=31)

Individual items on resource adequacy scale	**Total respondents (*n*=31)**	**Younger (19 – 22 yrs) (*n*=22)**	**Older (23 – 34 yrs) (*n*= 9)**
Know when to ask for outside help (*n*, %) 1-Strongly disagree 2- Disagree 3- Agree 4-Strongly agree	 2(6.5%) 2(6.5%) 14(44.8%) 13(41.2%)	 0(0.0%) 2(6.5%) 11(35.2%) 9(28.8%)	 2(6.5%) 0(0.0%) 3(9.7%) 4(12.8%)
Uses outside resources (*n*, %) 1-Strongly disagree 2- Disagree 3- Agree 4-Strongly agree	 1(3.2%) 3(9.7%) 18(57.7%) 9(28.8%)	 0(0.0% 1(3.2%) 16(51.2%) 4(12.8%)	 1(3.2%) 2(6.5%) 2(6.5%) 5(16%)
Confident help is available (*n*, %) 1-Strongly disagree 2- Disagree 3- Agree 4-Strongly agree	 2(6.4%) 8(25.9%) 10(32%) 11(35.3%)	 1(3.2%) 6(19.4%) 8(25.6%) 8(25.6%)	 1(3.2%) 2(6.5%) 2(6.5%) 3(9.7%)
Hospital resources are available (*n, %)* 1-Strongly disagree 2- Disagree 3- Agree 4-Strongly agree	 3(9.7%) 8(25.6%) 9(28.8%) 11(35.3%)	 1(3.2%) 8(25.6) 4(12.8) 9(28.8)	 2(6.5%) 0(0.0%) 5(16%) 2(6.5%)

The Mann-Whitney U test was used to test the difference between the independent variables (gender, age, shift work, acts of aggression and BN students who nursed MHCUs) and the dependant variable (resource adequacy) (Pallant, 2010) (Table 2: Variables of interest associated with resource adequacy). The p-value of significance was set at .05. There was no association between the demographics/nursing a MHCU/ harmed by or threatened by MHCU/shift of the incident and resource adequacy.

When examining for the shift and the occurrence of aggression, no participant responded to the question about the threat or harm occurring on both shifts, while five (38.5%) reported these incidents occurred on day duty, and eight (61.5%) reported these occurred on night shift. However, the Mann-Whitney U Test revealed no significant difference in resource adequacy levels of when the incident occurred according to the shift (day or night) (day shift (*Md* =14, *n* =7) and night shift (*Md* =13, *n* =10), *U*=32, *Z* = -0.30, *p* =.77, *r* =0.1).

A total of 13 (41.9%) respondents had either been harmed or threatened by an MHCU, with the predominance in younger females (n=8; 25.8%) as opposed to (n=3; 9.6%) older female respondents. The Mann Whitney U Test revealed no significant difference in perception of resource adequacy and being harmed or threatened by a MHCU (harmed/threatened (*Md* =14, *n* =13) and not harmed / threatened (*Md* =12, *n* =18), *U* =72, *Z* = -1.8, *p* =.069, *r* =0.2).

Table 2: Variables of interest associated with resource adequacy scale

Sample describers	**Median (***Md) of resource adequacy*	**Mann-Whitney U Test**	***p*-value**
Age	12	*U*=103	*p* =.501
Gender	12	*U*=49	*p*=.789
Nursed MHCU	12	*U*=86	*p*=.418
Harmed / threatened by MHCU	12	*U*=72	*p*=.069
Shift of incidence	13	*U*=32	*p*=.881

Difference in age, gender, nursed MHCU, harmed or threatened, shift of incidence were tested Mann-Whitney U test; **p*-value of significance set at <.05

A Cronbach's alpha coefficient of 0.8 showed internal consistency, for the subscale of resource adequacy.

DISCUSSION OF RESEARCH RESULTS

Students are only allocated to psychiatric units in their fourth year of the BN programme. However, due to the insufficiency of beds in the psychiatric wards of the district hospitals (Peterson and Lund, 2011:75), the majority of respondents (n=21,

68%) had nursed an MHCU in the general wards. Despite evidence suggesting that resources are not adequate (Peterson and Lund, 2011:75), students perceived resources in general wards to manage an MHCU with aggression to be adequate (mean 12.26, *sd* 2.95). The resource adequacy total is driven by the majority of respondents (n= 27, 86%), either agreeing or strongly agreeing that they knew when to ask for help. It is of interest that despite 49% being harmed or threatened there was no significant difference (p=.069) shown in the perception of resource adequacy. It is possible that the students believed they knew when to call for help, but called when the level of aggression was advanced. In light of the students having no formal mental health care education and given the percentage of respondents harmed or threatened, the probability exists of them misperceiving their self-assessed competence as well as possibly not being skilled enough to identify the early warning signs of aggression and the significance of intervening before crisis levels. In addition student nurses, like other South Africans, might have a higher threshold for violence (Steinman, 2003:4) and such tolerance could have contributed to their sense of adequacy.

Both Beech (2008:99) and Nau *et al.* (2007:940) suggest that student nurses can overestimate their ability. In an attempt to explain this possible absence of awareness, Nau et al. (2007: 939) attribute a lack of clinical experience in interacting with MHCUs as the reason for student nurses being harmed by the MHCUs. Beech (2008:101) draws attention to student involvement in de-escalation often being out of necessity in low resource settings, as opposed to a planned clinical learning experience. Formalised training is preferable in skills development for aggression management as opposed to experiential learning. Beech (2008:101) suggests that exposure to training with an emphasis on de-escalation and aggression prevention adds value to the ability to self-assess competence levels. As much as educators need to be concerned, so too are hospital managers accountable for the safety of student nurses in district hospitals where resources are inadequate (Burns, 2011:100). Despite the alarm being raised about the students' possible misperceptions, it is worth noting that a smaller majority (n=20, 64.1%), in comparison to the number knowing when to call for help, agreed or strongly agreed that hospital resources were available. Hospitals may have policies in place to address aggression in the MHCU, but due to student nurses not being permanent staff they may not be orientated to aggression management (Nau *et al.*, 2007:943).

In consideration of safety, recognition needs to be given to the particular vulnerability of student nurses. There was no significant difference in gender with regards to perceptions of resource adequacy. However, in the study respondents who had nursed an MHCU were predominantly females in the younger age group and similarly the same group was most harmed by the MHCU. This finding confers with other researchers, who identified that acts of aggression were more common towards female nurses, especially student nurses, being young and less experienced in aggression management (Beech, 2008:98; Edward *et al.*, 2014:655; James, Isa

and Oud, 2011:130). Beech (2008:99) identifies that older students (>26years) saw violence as more predictable and preventable. A further consideration is that male nurses have been shown to feel more confident than female students in maintaining personal safety (Beech, 2008:98).

Night duty added to the younger female nurses' risk of being susceptible to aggression. The shift in which the majority of student nurses (in particular the younger female respondents) were harmed or threatened (61.5%) was night duty. A possible explanation in terms of resources is that it is a quieter time with fewer staff allocated to night duty (Edward *et al*., 2014:8; Shiao *et al*., 2010:823). Fewer staff could equate to fewer clinically experienced staff lacking skills in early detection and management of aggression, with Edward *et al*. (2014:655) suggesting that the less experienced practitioner can intensify the problem. This can be seen in the student who fails to recognise the capability of the MHCU for self-determination, but enters into a conflictual relationship in an attempt to carry out 'orders', in the belief of doing the correct thing (Nau *et al*., 2007:943). In addition, at night staff feel more threatened by potential attacks (Shiao *et al*., 2010:82), which is not surprising as night duty is a period in which there is a greater occurrence of aggressive incidents involving the MHCU (Amoo and Fatoye, 2010:352; Roche *et al*., 2010:15). These factors need to be considered when placing students on night duty. Magnavita and Heponiemi (2012:8) suggest that a supportive environment is a strong buffer against violence, finding that isolated health care workers with low social support were exposed to violence. Students are dependent on the environment for support and protection (Nau *et al*., 2007:943).

The study did not enquire into whether the students reported their exposure to aggression. However, it is concerning that thirteen (41.9%) had been threatened or harmed by an MHCU. A deterrent to reporting aggressive incidents is the incorrectly held view that aggression is part of the job (Roche *et al*., 2010:19; Steinman, 2003:23), at times accompanied by self-blame for lack of competency (Ergun and Karadakovan, 2005:159). Nurses have also held the belief that nothing much will be done about it and choose to ignore the incident or try to forget it (Ergun and Karadakovan, 2005:159). Of further concern in reporting aggression displayed by an MHCU is the lack of legislation pertaining to on the job violence, which has resulted in cases not being prosecuted, with a tendency to silence aggressive incidents (Ergun and Karadakovan, 2005:159). In addition, it can be suggested that if the students have not yet learnt about aggression management, they could not realise which incidents to report (Moumtzoglou, 2010:543) or how to recognise what is labelled as aggression (Nau *et al*.,2007:943).

LIMITATIONS OF THE STUDY

The study population was small, limited to one university and only from third year students and thus not generalisable to the South African third year student population.

RECOMMENDATIONS

Hospitals need to develop and communicate to all personnel, including students, a zero tolerance for violence policy, including the MHCU admitted for 72-hour observation, with explicit protocols to be followed in the event of incidents, such that reporting is encouraged. The establishment of a violence register with an accompanying policy that requires reporting of all incidents offers the opportunity for the development of a reporting culture. Such a register could provide information for further examination and analysis of incidents involving students and the MHCU, leading to the implementation of preventative measures. Increased recognition needs to be given to the vulnerability of the student nurse, particularly on night duty where greater protection should be offered through mentoring.

Aggression management needs to be included at first year level with mentoring, as reliance on experiential learning of such a potentially dangerous setting with vulnerable subjects is not educationally or ethically sound.

It is further recommended that this study is repeated at other universities and colleges in South Africa involving all student nurses.

CONCLUSION

Legislated changes have occurred in South Africa pertaining to the 72 hour observation period of the MHCU, which have resulted in increased demands on health care services, in particular in district hospitals (Burns, 2011: 100; Ramlall *et al*., 2010:668). Hospitals admitting MHCU for 72 hour admission are seen to lack adequate resources in specialist staff and infrastructures (Burns, 2008:48). It is concerning that these legislated changes could impinge negatively on vulnerable student nurses. The students, especially the younger females, are seen as a vulnerable group, yet they conceptualise resources to be adequate, overestimating their level of skill, which is problematic considering the proportion who have been subject to acts of aggression. It suggests a need for support from the training institution (Nau *et al*., 2007:943), accompanied by education on the management of aggression in MHCU (especially assessment) in the first year of studies. In addition, district hospitals need to create awareness of the availability of hospital resources as well as re-examine safety protocols regarding the needs of student nurses with particular attention being paid to night duty.

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