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Nutritional Care in Psychiatry: Assessing Health Professionals' Knowledge, Attitude and Practices

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Abstract: Contemporary evidence suggests that proper nutrition plays a key role in the treatment and prevention of mental illness. This hospital-based descriptive cross-sectional study sought to examine health professionals' knowledge, attitudes, and practices toward patient nutritional care. The study was conducted at the Bono Regional Hospital in Sunyani, Ghana. Eighteen (18) health professionals working at the hospital's psychiatric unit were recruited for the study through census. Semi-structured, self-administered questionnaires, prepared and administered via Google forms, were used to collect data for the study. Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 25. There was a 100% response rate. Males constituted 66.7% of the sample. More than one-fourth (27.8%) of the respondents were community mental health officers, and the majority of them were full-time workers (66.7%). Most of the respondents worked 3-5 days per week (77.8%) and 6-8 hours per day (83.3%). The larger proportion of the sample had worked in the health sector for less than 2 years (72.2%). Based on our specified criteria, most of the respondents had adequate knowledge (83.3%), a positive attitude (94.4%), and good practices (83.3%) toward patient nutrition. Overall, knowledge, attitude, and practices toward patient nutritional care were good, suggesting that nutritional care has been recognized as an essential component of the treatment and prevention of mental illness at Bono Regional Hospital. It is however important that the management of the hospital ensures timely and adequate provision of essential logistics and resources needed for patient nutritional care.

Keywords: Nutrition, psychiatry, knowledge, attitude, practice, health professionals.

1. INTRODUCTION

Anxiety, depression and other forms of mental disorders pose a significant socio-economic and health burden on individuals and societies, and account for a larger proportion of the global disability (Marx *et al.*, 2022). To date,

anti-depressants and other pharmacotherapies remain the mainstay treatment for mental disorders globally. Unfortunately, this treatment modality and the other commonly used methods such as cognitive-behavioural

therapy avert less than 50% of the disease burden, suggesting the need for novel strategies in the prevention and treatment of mental disorders. One modifiable risk factor for mental illness identified in recent interventional studies is the quality of individuals' diet (Marx *et al.*, 2022). In several studies, the onset of psychiatric symptoms followed poor dietary practices, clearly highlighting the direction of causality (Rucklidge & Kaplan, 2016). At the University of British Columbia (UBC), Canada, Rossa-Roccor *et al.* (2021) found a significant positive association between junk food component and depression and anxiety.

Against this background, the role of the dietician in the management of psychiatric patients cannot be overlooked. The dietician is the nutrition expert in the health care team (Sunguya *et al.*, 2013). However, in many healthcare settings, especially in developing countries, dietitians are not always available to provide nutritional care for patients (Teasdale *et al.*, 2019). Also, hospitalized patients are usually less motivated to follow dietary recommendations since their ability to learn about proper dietary habit may be affected by anxiety, pain, and/or medications (Teasdale *et al.*, 2019). Since nurses and other cadre of health professionals mostly have the greatest contact with patients, they play an equally important role in the nutritional care of patients, even in settings where dietitians are available. Although these cadre of health professionals are not trained to take the position of the dietician when patients are at high risk of nutritional problems, they are expected to know the principles of nutritional care which will enable them to support the nutritional care of their patients (Al-shwaiyat *et al.*, 2013; Choue & Choue, 2019).

Several studies have sought to understand the level of knowledge and attitude of health workers toward patient nutritional care in different countries. Suboptimal levels of knowledge on patient nutrition have been reported among health workers in the African region; Cameroon (Yang, 2022), Egypt (Gomaa

et al., 2022), and Ethiopia (Tsige *et al.*, 2022). On the contrary, however, relatively high level of knowledge on patient nutritional care was reported among nurses in Australia (Clarke *et al.*, 2016). In Ghana, only a few studies have sought to examine the knowledge, attitude and nutritional care practices of health professionals working in psychiatric hospitals. Specifically, no such study has been conducted at the Bono Regional hospital, the largest secondary-level hospital and major referral center in the Bono Region of Ghana. This study sought to address this knowledge gap.

2. MATERIALS AND METHODS

Study Design and Study Area

This single-site descriptive cross-sectional study was conducted at the psychiatric unit of the Bono Regional Hospital in the Sunyani Municipality of Ghana. The Sunyani Municipality is one of the twelve (12) districts/municipalities in the Bono Region of Ghana, with a population of 193,595 (the highest in the Bono Region). About 50.2% of the municipality's population is made up of females. Most of the residents of the municipality live in urban communities (80.8%) (Ghana Statistical Service [GSS], 2021). For the purposes of health service delivery, the Sunyani Municipality is divided into six (6) sub-municipals, namely, Abesim, Antwikrom, New Dormaa, New Town/Baakoniaba, Penkwase, and Sunyani Central (Asare *et al.*, 2019).

In addition to the Bono Regional Hospital, the Sunyani municipality has 64 public and private health facilities. Most of the private facilities in the municipality are located in the urban centers (Ministry of Finance - Ghana, 2022). The Bono Regional Hospital is the largest secondary-level hospital in the Sunyani Municipality and the Bono Region of Ghana, serving as the major referral center for both primary- and secondary-level health facilities in the Bono, Ahafo, and Bono East Regions (Nketia *et al.*, 2022). The psychiatric unit of the Bono Regional Hospital provides 24-hour

healthcare, including expert services for a wide range of mental health conditions. There are about 20 beds at the psychiatric unit for inpatient admission and care, and remains the largest psychiatric unit in the Bono Region. A cadre of health professionals works at the psychiatric unit; including community mental health officers, nurses and clinical psychiatric officer. Several effective mental health services, including screening, psychoeducation, and medication are available at the unit. The selection of the Bono Regional Hospital for the study was determined by the hospitals' status (major secondary-level referral center) and services provided at the psychiatric unit.

Study Population

The study population composed of health professionals at the psychiatric unit of the Bono Regional Hospital. The selection of respondents for the study was based primarily on the unit/department where they work, supported by data obtained from the unit/department head. The exclusive use of health professionals from the psychiatric unit was informed by recent evidence which supports the essential role of mental health workers in nutritional care of their clients (Al-shwaiyat *et al.*, 2013; Freeman, 2013; Gill *et al.*, 2017, 2021; Offor *et al.*, 2021; Rossa-Roccor, Richardson *et al.*, 2021; Rucklidge & Kaplan, 2016; Strassnig *et al.*, 2013).

Sample Size Determination

Considering the heterogeneous nature of the study population, and the small population size, a complete enumeration (census) method was used, i.e. all health professionals at the psychiatric unit of the Bono Regional Hospital who met our specified inclusion criteria were recruited for the study.

Sampling Technique

The respondents were recruited through census. A week to the data collection, an official notice with brief introduction to the study was sent to the psychiatric unit of the Bono

Regional Hospital. A complete sample frame (an exhaustive list (names) of all health professionals at the psychiatric unit) was obtained from the head of the psychiatric unit. Following this, one of the researchers met the unit head and all health professionals at the departments to discuss the study – the research objectives, potential benefits of taking part in the study, and how to respond to the questionnaire. The researcher set aside fifteen minutes for questioning and clarification. Thereafter, verbal consent was obtained. All health professionals at the unit who consented to participate in the study were included in the data collection. Inclusion criteria were; (1) health professional at the psychiatric unit of the Bono Regional Hospital, (2) directly involved in the care of mental health clients, and (3) was willing to participate in the study voluntarily. A health professional was defined as a person who had been trained and/or educated, and certified to practice health/medical care in Ghana.

Data Collection Instrument

Semi-structured questionnaires were used to collect data for the study. The data collection instrument was adapted from the literature (Laur *et al.*, 2016; Ray *et al.*, 2015) and modified to suit the objectives of this study. The instrument was prepared using Google forms, and structured into four components. The first component contained only closed ended questions and assessed respondents' socio-demographic characteristics such as age, sex, profession, employment type, number of working days per week, number of working hours per day, and the number of years working in the health sector. The second, third and fourth components of the questionnaire also contained simple, closed ended questions on knowledge, attitude and practices of nutritional care respectively.

Data Collection Technique

Having obtained verbal informed consent, telephone numbers and WhatsApp contacts of all persons who consented to participate in the study were obtained. A web link to Google forms (questionnaire) was sent to them via WhatsApp. Participants were informed to provide responses to the questionnaire within the next 72 hours at their convenience. A follow-up telephone conversation was made within the next 48 hours to ensure maximum participation after which the link to the questionnaire was closed. The researchers anticipated challenges (e.g. poor network, lack of data bundle, etc.) that could arise from online survey; hence, printed questionnaires to be administered to respondents who faced challenges in responding to the survey. However, the researchers did not receive any such complaints from the respondents during the follow-up telephone conversation.

Data Analysis

After the data collection, the primary data were downloaded from Google forms and exported into Statistical Package for Social Sciences (SPSS) version 25 (IBM Corp, Armonk, New York, United States, 2017). Data cleansing was done using simple frequency tables. Respondents' demographic data including age, sex, profession, employment type, number of working days per week, number of working hours per day, and the number of years working in the health sector were summarized frequencies and percentages.

Level of knowledge on patients' nutritional care was assessed using a set of fifteen (15) questions. For every question, a list of options ("Yes" and "No") was provided for respondents to choose from, with corresponding scores. For positively worded questions, "Yes" corresponded with "1" mark and "No" corresponded with "0" mark. The scores were reversed for negatively-worded questions. The minimum and maximum possible scores were 0 and 15 respectively. The total score for every respondent was calculated as the summation of

the individual scores. The total scores were converted into percentages and respondents were classified as having "adequate knowledge" or "inadequate knowledge" on patient nutritional care depending on their total score. Respondents who scored 50% or more were graded as having "adequate knowledge" while those who scored less than 50% were classified as having "inadequate knowledge" (Laur *et al.*, 2016). Mean (with standard deviation), median and modal knowledge scores were also calculated.

Attitude toward patient nutrition was assessed using a set of nine (9) questions. For every question, a list of options ('Strongly disagree', 'disagree', 'neutral', 'agree' and 'strongly agree' corresponding to the following scores: '1', '2', '3', '4', and '5') were provided for respondents to choose from. The lowest and highest possible scores were 9 and 45 respectively. The total score for every respondent was calculated as the summation of the individual scores. The total scores were converted into percentages and study participants were classified as having a "positive attitude" or "negative attitude" toward patient nutritional care depending on their score. Respondents who scored 50% or more were graded as having "positive attitude" while those who less than 50% were classified as having "negative attitude" (Ray *et al.*, 2015). Mean (with standard deviation), median and modal attitude scores were also calculated.

Nutritional practices were assessed using a set of seven (7) questions. For every question, a list of options ("Yes" and "No" corresponding to the following scores: "1" and "0") were provided for respondents to choose from. The minimum and maximum possible scores were 0 and 7 respectively. The total score for every respondent was calculated as the summation of the individual scores. The total scores were converted into percentages and respondents were classified as demonstrating "good practices" or "poor practices" toward patient nutritional care depending on their score. Respondents who scored 50% or more were graded as demonstrating "good practices"

while those who less than 50% were classified as demonstrating “poor practices” toward patient nutritional care (Laur *et al.*, 2016). Mean (with standard deviation), median and modal practices scores were also calculated. The results of the study were summarized in table 1-4.

Ethical Consideration

Having obtained approval for the study from the Research and Ethics Review Committee of the College of Health, Yamfo, Ghana, an introductory letter was obtained from the college and served to the management of the Bono Regional Hospital. Permission to undertake the study in the respective institution was granted by the management of the institution. Subsequent to that, the researchers met the unit head and workers at the psychiatric unit to discuss the objectives and significance of the study. All questions and concerns raised by the respondents were addressed. Thereafter, informed consent (verbal) was obtained.

The study questionnaires were anonymized to ensure that confidentiality was maintained.

3. RESULTS

Socio-demographic Characteristics and Work History of Respondents

Table 1 below presents respondents' socio-demographic characteristics and work history. Eighteen health professionals at the psychiatric unit of the Bono Regional Hospital participated in the study. Most of them were between 18 and 35 years (94.4%) of age. Males constituted 66.7% of the sample. More than one-fourth (27.8%) of the respondents were community mental health officers and the majority of them were full-time workers (66.7%). Most of the respondents worked for 3-5 days per week (77.8%), and about 6-8 hours per day (83.3%). The larger proportion of the sample had worked in the health sector for less than 2 years (72.2%).

Table 1 Socio-demographic characteristics and work history of respondents (n = 18)

Variable	Frequency (n)	Percent (%)
Age		
18-35 years	17	94.4
> 35 years	1	5.6
Sex		
Male	12	66.7
Female	6	33.3
Profession		
Community mental health officer	5	27.8
RGN/CNA/CHN	5	27.8
Psychiatric nurse	3	16.7
Clinical psychiatric officer	1	5.5
Others	4	22.2
Employment type		
Full time	12	66.7
Part time	6	33.3
Number of working days per week		
1-2 days	1	5.6

Variable	Frequency (n)	Percent (%)
3-5 days	14	77.8
6 or more days	3	16.7
Number of working hours per day		
< 6 hours	3	16.7
≥ 6 hours	15	83.3
Years of service		
< 2 years	13	72.2
≥ 2 years	5	27.8

Note. RGN, Registered General Nurse; CNA, Clinical Nurse Assistant; CHN, Community Health Nurse.

Knowledge on Patient Nutritional Care

Table 2 presents descriptive statistics of respondents' knowledge on patient nutritional care. Based on our specified criteria, most of the respondents (83.3%) had adequate

knowledge on patient nutritional care. Mean (SD), median and modal knowledge scores were 66.3 (\pm 15.25), 70.0 and 70.3 respectively.

Table 2 Descriptive statistics of knowledge on patient nutritional care (n = 18)

Grading	Frequency (n)	Percent (%)
Adequate	15	83.3
Inadequate	3	16.7
Central tendency		
Mean	66.3	
SD	15.25	
Median	70.0	
Mode	70.3*	

Note. SD = Standard Deviation. *Multiple modes exist; the smallest value is shown

Attitude toward Patient Nutritional Care

Table 3 presents descriptive statistics of respondents' attitude toward patient nutritional care. Based on our specified criteria, the vast majority of the respondents

(94.4%) showed a positive attitude toward patient nutritional care. Mean (SD), median and modal attitude scores were 77.8 (\pm 11.86), 77.8 and 64.4 respectively.

Table 3 Descriptive statistics of attitude toward patient nutritional care (n = 18)

Grading	Frequency	Percent
Positive	17	94.4
Negative	1	5.6
Central tendency		
Mean	77.8	
SD	11.86	

Median	77.8
Mode	64.4*

Note. SD = Standard Deviation. *Multiple modes exist; the smallest value is reported.

Practices toward Patient Nutritional Care

Table 4 presents the descriptive statistics of respondents' nutritional care practices. Based on our specified criteria, a larger proportion of

the respondents (83.3%) demonstrated good practices toward patient nutritional care. Mean (SD), median and modal practices scores were 77.0 (\pm 18.41) and 85.7 respectively.

Table 4 Descriptive statistics of nutritional care practices (n = 18)

Grading	Frequency	Percent
Good	15	83.3
Poor	3	16.7
Central tendency		
Mean	77.0	
SD	18.41	
Median	85.7	
Mode*		

Note. SD = Standard Deviation. *Same as median.

4. DISCUSSION

In an institutionally-representative sample of health professionals at the psychiatric unit of the largest secondary-level hospital in the Bono Region of Ghana, we examined the level of knowledge, attitude, and practices toward patient nutritional care.

The result of our study indicates that the majority of the respondents (83.3%) had adequate knowledge of patient nutritional care. This finding seems to be consistent with that of an earlier study in Australia where the majority of nurses had good (60.1%) and excellent (10.3%) knowledge of enteral nutrition (Clarke *et al.*, 2016). However, the current finding contradicts those of similar studies in Cameroon (Yang, 2022), Egypt (Gomaa *et al.*, 2022), and Ethiopia (Tsige *et al.*, 2022), where 75.5%, 64.3%, and 67.7% of health workers, respectively, demonstrated an inadequate level of knowledge on patient nutritional care. A possible explanation for the

rather contradictory results is the fact that many health training programmes do not incorporate nutrition coursework and placements (Munuo *et al.*, 2016), leaving graduates of these programmes with basic knowledge and skills in patient nutritional care. It could also be the case that our respondents had benefited from continuous nutrition education programmes and in-service training which seems to have grown extensively in recent years with the advent of distance education, sandwich programmes and virtual learning platforms in Ghana and across the globe. Our finding provides evidence to suggest that the majority of health professionals at the psychiatric unit of the Bono Regional Hospital have adequate knowledge on patient nutrition which can be used to improve treatment outcomes for patients accessing care at the unit.

The result of our study also indicates that most of the respondents (94.4%) showed a positive attitude toward patient nutritional care. This

result corroborates findings of a great deal of research in the field of nutritional psychiatry (Choue & Choue, 2019; Munuo *et al.*, 2016; Naser *et al.*, 2021). Among health professionals recruited from hospitals in Dar es Salaam, Tanzania (Munuo *et al.*, 2016), Danish Municipality (Choue & Choue, 2019) and Gaza Strip (Naser *et al.*, 2021), more than half of them demonstrated a positive attitude toward patient nutritional care. On the contrary, however, a study in Morogoro Urban District, Tanzania, found that overall attitude of health workers toward patient nutritional care was poor (Moses, 2018). The observed difference in the study findings could be explained in part by the relatively good nutritional knowledge shown by our respondents which could have influenced their attitude toward patient nutritional care. In a study among health professionals in Tanzania, inadequate nutrition training in medical school, lack of resources and motivation were identified as factors associated with poor practices toward patient nutritional care (Munuo *et al.*, 2016).

Another important finding of our study is that the majority of the respondents (83.3%) demonstrated good practices toward patient nutritional care. This finding seems to be consistent with those of previous studies in Gaza Strip (Naser *et al.*, 2021) where more than half of health professionals demonstrated good nutritional care practices. Contrary to our findings, however, previous studies in Egypt (Khalefa *et al.*, 2018), Ethiopia (Tsige *et al.*, 2022), Korea (Choue & Choue, 2019), and Tanzania (Moses, 2018; Tsige *et al.*, 2022) found that the majority of health professionals practised poor nutritional care. The difference in study findings could be explained in part by the relatively good nutritional knowledge and positive attitude of our respondents toward patient nutritional care which could have influenced their nutritional practices. In the previous study, however, overall knowledge and attitude on patient nutritional care was poor. Munuo *et al.* (2016) have also observed that inadequate training in patient nutritional care at medical/nursing school, and the lack of resources and motivation were factors

associated with poor nutritional care practices. This could be another reason for the inconsistency in study findings. The current finding provides some evidence to suggest that nutrition has been recognized as an essential component of patient care at the psychiatric unit of the Bono Regional Hospital and is critical to achieving good treatment and health outcome (Marx *et al.*, 2022).

5. CONCLUSION

Overall, knowledge, attitude, and nutritional care practices were good and suggest that nutrition has been recognized as an essential component of patient care at the psychiatric unit of Bono Regional Hospital. Lack of resources and motivation for health professionals have been reported as reasons for poor nutritional care practices, even in settings where health professionals demonstrate adequate knowledge of patient nutrition. It is therefore important for management of the Bono Regional Hospital to ensure timely and adequate provision of essential logistics and resources needed to work effectively.

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Conflict of Interest

None declared.

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