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A Critical Reflection on Integrating Gardening Activities into Psychiatric Patient Care from The Nurses' Perspectives

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ABSTRACT

Background: Gardening may have multiple physical and mental health tangible benefits. However, gardening has never been fully implemented in healthcare settings prioritising patient care.

Objective: This study explored how mental health nurses perceive gardening activities as part of their patient care. Methods: In this descriptive qualitative study, thematic analysis of four focus group discussions (n = 22 nurses) in one psychiatric department in Brunei Darussalam was identified through purposive sampling.

Findings: Three key themes arose from the analysis (1) Safeness during gardening, (2) Maintaining the interest, (3) Coordinating the activity.

Conclusion: Participating nurses emphasised the perceived challenges of gardening as part of patient care, with a particular focus on patient and nurse safety. Also of concern are the patient's interest throughout the activity, the skills and knowledge of the nurses involved, and the clarity of their roles, especially in coordinating gardening activities. To ensure the garden's long-term viability as part of patient care, developing and reinforcing a guideline that clarifies the roles of nurses and patients is crucial. Future research should focus on patients' preferences and how to engage them in gardening. It is also desirable to examine the possible impact of gardening activities on individuals in psychiatric settings, such as patients, nurses, and other healthcare professionals particularly in establishing clear guidelines.

Keywords: Mental Health, Gardening, Brunei, Qualitative, Nurses, Patient Care

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INTRODUCTION

Gardening has been practised for many years by people of all cultures and ages (1). Gardening has numerous physical and mental health advantages (2). By introducing small plants into the ward settings, gardening activities can be done modestly. It is believed that exposure to plants and green space will improve the mental health and mood of ward residents, including patients, patient families, and healthcare workers (3). Vital signs such as blood pressure, pulse rate, and muscle tenseness are thought to be positively influenced by moderate gardening activities (4). However, gardening has never been widely implemented in healthcare contexts while direct patient care has been prioritised.

Gardening is cultivating plants, exercising, socialising, and growing food. Most scientific studies on gardening, on the other hand, describe it as decorating the ward with greeneries and others as simply engaging the patients with artwork related to plantations and greeneries (3). These broad definitions demonstrate the lack of a standardised garden or gardening approach, as one type of gardening involves more significant physical contact while another focuses on psychological stimulation. Thus, creating the ideal gardening activity to meet all patients' needs and help them reach their desired therapeutic outcomes is challenging.

Second, is the challenge the organisation faces when implementing gardening as an intervention. Regarding human resources, nurses and health professionals focus more on their routine work and may not find gardening a productive or fruitful intervention (5). Furthermore, vandalism is also reported as a common issue as guests, other patients, or visitors tend to vandalise the plants, destroying the planter's hard work (6). Meanwhile, there is concern about the patient's preference and subjective nature to reduce pain and stress (7). While some patients may find greeneries calming to their state of mind; however, others may not share the same sentiment (8). Furthermore, some staff members may find the added need to perform physical gardening to be time-consuming and physically demanding, causing a negative implication on their work performance and efficiency (9). While gardening has been practised in several hospitals in Brunei, it is not usually considered an integral element of the care plan for patients.

METHODS

Study design

A qualitative descriptive study design was undertaken as it was the most appropriate to explore nurses' perspectives on the perceived possibilities and limitations of gardening activities in psychiatric settings in Brunei Darussalam.

Research participants

The study was conducted in a primary psychiatric department in Brunei Darussalam. The participants were selected using a purposive sampling technique from nurses caring for patients in Brunei's leading psychiatric service. A department nurse manager who served as gatekeepers invited the participants. Thirty nurses attended the recruitment briefing, of which twenty-two consented to participate are between 28 and 52 years of age, with work experience in the psychiatric department varying from 3 to 20 years. The participant inclusion criteria include more than one year of working experience in the psychiatric department; thus, nurses with less than a year of working experience were excluded. Two recruitment briefings were conducted where potential participants were briefed on the research's nature and expected outcome. Thirty nurses attended the recruitment briefings; of these, 24 staff nurses agreed to participate, whereas the other six chose not to join due to their personal choice and inability to meet the set date and time for the discussions, which was respected due to the voluntary nature of the study.

Data collection

Four focus group discussions (two groups of five nurses and two groups of six nurses) were held during normal working hours in a meeting room. Data collection was guided by six semi-structured, open-ended questions about the study. The first author moderated the discussion, while the second took notes. The discussion was audio-recorded and lasted between 45 and 60 minutes, with most of the discussion occurring in English and Malay.

Table 1: Characteristics of the participants

Characteristics		N
Gender	Male	14
	Female	10
Age (Years)	20-29	3
	29-39	13
	39-49	8
Post	Senior staff nurse	1
	Staff nurse	23
Work Experience (Years)	1-5	3
	6-10	4
	11-15	4
	16-20	10
	>20	3

Field notes were taken as a backup and to further question with participants' input to improve the richness and engagement of the discussion. The discussion took at least 45 minutes to one hour per session, comprising 4 to 6 participants. The interview would begin with a general question "What do you think about gardening as a form of patient care?" Follow-up questions would then be asked on the benefits and challenges the nurses and patients may face with gardening as part of their patient care. Participants would also be asked how gardening activity may complement the current existing form of care, such as consultation and medication, and lastly, what the participants think the government needs to do to ensure the success of the gardening program. Depending on the interview, further follow-up questions were used for clarification, such as "Can you explain more by offering some examples of how gardening can benefit the patients?".

All focus group discussions occurred within the psychiatry unit premise, a private, isolated meeting room. Discussions were carried out in June 2021 for four successive days. After no new theme had been identified, the research team discussed data saturation in multiple meetings.

Data analysis

All interviews were transcribed verbatim and analysed using six phases of the thematic process (10). The first phase involved the research team reading and re-reading to become familiar with the collected data. In contrast, the second phase entailed coding the transcripts and organizing all relevant data extracts for further stages of analysis. Verbatim transcription was done to improve readability for the researcher throughout the data analysis and to ensure that no valuable data was left out (11). The third phase prompted the research team to examine the codes and collect data to establish meaningful broader patterns of potential themes. Phase four involved linking the themes to the transcripts to guarantee they presented a credible story about the data and answered the research question. The fifth phase involved analysing each theme and defining its scope and focus. Finally, in phase six, the research team combined the analytic narrative and data extracts and contextualized the findings considering existing literature.

It is essential to emphasise that each phase was completed recursively, with the group moving back and forth between them to guarantee that a uniform level of comprehension was achieved. These phases were regarded as a roadmap for analysis, facilitating a complete and in-depth engagement with the data analysis. English words or phrases were used when translating from Malay to English since the source words have an English translation. There were no complicated words or phrases to translate or interpret. Transcripts were not returned to participants for comments or correction.

Trustworthiness of study findings

This study used the Consolidated Criteria for Reporting Qualitative Research (COREQ) to guide the reporting (12). Using purposive sampling ensured that the participants' accounts adequately described the phenomenon investigated. The interviews were guided by semi-structured open-ended questions that allowed them to express as much as they wanted regarding their experiences freely. The discussions strived to promote dialogue and active discussions and asked for clarification of the narratives to achieve credibility.

The research team conducted the interviews for dependability, transcribed

the recordings verbatim, and presented quotes from the nurses in the findings for conformability. The research team performed coding, analyzing, and categorizing of the data. The team further checked and confirmed the data to reach a consensus on allocating and matching findings to sub-themes and themes. The findings could improve other nurses' understanding of the quality of care and the importance of maintaining a positive attitude, as evidenced by the participants' quotes.

Ethical considerations

Before starting the research, permission to recruit, interview, and collect data from participants was obtained with full approval from the Joint Committee of the Institute of Health Sciences Research Ethics Committee and Medical and Health Research Ethics Committee (Reference: UBD/PAPRSBIHSREC/2021/17). All participants were given the information sheet on the research study. Participation in the research study is voluntary and consented to by the participants before the interview. They also have the right to withdraw from the study without requiring any reason. All participants' identities were kept anonymous, and participants were identified in the data using the Participation Identification Number (PIN).

FINDINGS

The analysis revealed overarching themes from the nurses' reflections and working experiences in the psychiatric department.

Theme 1: Safeness during gardening

Most nurses indicated concern about their safety during the gardening activity. Many expressed uncertainties, particularly when involving patients with unpredictable moods in gardening activities. Numerous external factors, such as weather and people, and internal factors, such as tension, anger, frustration, and impatience in gardening, may influence a patient's mood.

"We do not know the patient's body. The patient's mood can change at any moment's notice. Especially in a hot climate like this country, I would not like gardening in this heat, let alone the patients. Also, forcing the patients to perform gardening may cause stress and anger causing them to be more likely to be aggressive and unpredictable." (Female Nurse 2, FGD 3)

The nurses had similar doubts about patient safety. Several nurses voiced worries about the risk that the patient may injure themselves or other patients and staff members when using gardening tools, such as shears and pruners.

"Sometimes using gardening tools like a shovel can be very dangerous. Patients can use it to harm other patients and potentially harm themselves. Especially those patients with unpredictable behaviours and with a higher risk of aggression." (Male Nurse 4, FGD 1)

More than half of the nurses also described the potential of absconding for patients who might use gardening as an excuse to leave the unit. Because of these risks, the nurses believed adequate staffing and supervision would reduce the patient's risk of harm and absconding while gardening.

"From my experience, patients tend to be guarded with their illness, sometimes with staff. They may use the outing as a ticket for absconding, so it is better to have security and enough staffing to monitor them." (Male Nurse 2, FGD 4)

However, not all nurses agreed with this notion. Several of them asserted that the possibility of absconding is not an important concern for nurses. Before allowing patients to garden, nurses must ensure the area is secure with locked gates and vigilant security monitoring patient activity. In addition, the nurses stressed the importance of evaluating a patient's mental capacity before allowing them to leave the ward.

"Absconding is unlikely to be a problem if the place is well-secured. We need to double-check that the gates are shut. Securities must also be informed before we bring outpatients for gardening, so the risk of absconding will be much less. Along with the doctors, the nurses' job is to decide whether a patient is fit enough to go gardening." (Male Nurse 4, FGD 3)

Next is the concern over environmental safety. Several of the nurses across the focus groups also voiced concerns about the

outdoor environment of the unit. Several of them pointed out that the local area of the psychiatric unit occasionally would be encountered wild animals such as dogs, monkeys, snakes, and bees. All these animals can cause harm to the garden as well as the people around the garden area. The nurses believed that the dangerous animals would harm the patients' physical and mental health, causing them to be fearful, reluctant to participate in the gardening activity.

"We are concerned that wild animals like snakes, bees, and monkeys often visit our place. These creatures may scare or, even worse, attack the patients. We are trying to avoid that as we do not want to inflict harm to the patients and do not want to break the trust between the patients and us nurses as the patients trust in delivering their care and decision making." (Male Nurse 6, FGD 1)

Theme 2: Maintaining the interest

Maintaining the patient's interest in gardening activities was a common topic of discussion among nurses during the focus group. According to them, when a person, particularly a mental health patient, is compelled or insists on gardening, it may cause further issues with their recovery, mood, and admission experience.

We must not force patients with mental illnesses into the garden because they will be triggered and negatively affect themselves, others, and the garden. The hot weather surroundings, staff, and patients present during the exercise could be potential triggers. (Male Nurse 4, FGD 3)

The nurses also mentioned that not everybody would appreciate facing the weather and nature outdoors. Some patients show negative symptoms such as withdrawal from activities and social situations. This can be seen in patients suffering from anxiety disorders, depression, and bipolar disorder. The patients may prefer to remain indoors in the ward, where it is quieter, less stimulating, and fewer potential stimuli for their mental health.

"As nurses, we must recognise that no two patients are identical. Some patients, especially the depressed and anxious ones, would prefer to stay indoors, stay in their beds, and avoid socializing as it will be less stimulating and stressful. These patients would be more challenging to convince to participate in gardening activities." (Female Nurse 4, FGD 2).

In addition, several nurses in all focus groups reported that some nurses on the unit are unfamiliar with gardening in terms of roles, required tools, and plant care; as a result, they may not be able to encourage patients to join and partake in gardening effectively. Due to these factors, several nurses have stated that more research, seminars, and training are required to promote the value of gardening in clinical settings. Through this educational exposure, mental health nurses may be better able to understand the benefits of gardening to patient care and will be able to prepare and implement the programme with greater efficiency.

"We need someone who can teach us gardening, especially the tools, watering skills, and fertilizers. At least we would be educated enough in gardening to prepare the patients on how to do it effectively and appropriately. Some of us have difficulty explaining how to do gardening to the patients and why they must do it. We also do not have the interest and knowledge to do gardening, causing the patient to be uninterested in gardening." (Female Nurse 3, FGD 2).

However, several nurses oppose formal training and education in gardening because it may be too expensive and time-consuming. Instead, they advocated for self-guided online gardening instruction, where gardening knowledge could be accessed for free at any time.

"Formal gardening training is unnecessary as we have the internet where we can easily search it online and learn anytime for free. If gardening is part of our patient care, we must learn independently instead of relying on others." (Male Nurse 4, FGD 3).

Theme 3: Coordinating the activity

Another critical reflection brought up by many nurses during the discussions involves managing the day-to-day operations of the gardening activity if it were to be integrated into the existing patient care. The nurses generally raised serious concerns about the project coordination regarding the best appropriate personnel to monitor and assist the patients

while gardening.

As diverse multidisciplinary team members, such as doctors and therapists, are also involved with the same patients, most participants wondered when it is appropriate to engage in gardening with patients. According to them, the nurses are already engaged in their nursing duties, such as performing interventions, monitoring patients in ward settings, and performing clinic and administrative work within the clinic department. The nurses also mentioned that gardening requires physical activity and energy; hence the nurses are worried that after performing gardening, they would not be able to perform tasks such as medication administration, communication with patients, lifting of patients, and other nursing tasks, which also requires enough energy to function efficiently.

"Another thing to consider is that nurses continuously monitor patients' safety inside the ward if any unwanted incident happens. If we were also to handle gardening with the patients outside the ward, fewer staff would be on standby to help observe and assist in case any incidents happen." (Male Nurse 4, FGD 1)

Meanwhile, several nurses highlighted the management department's proper delegation to determine which staff members are most suited to handle or oversee the gardening activities. With appropriate delegation, nurses can better prepare themselves by acquiring the necessary equipment and skill sets to train other staff members and teach patients on proper gardening techniques.

"We need to figure out how to divide up this gardening task. The person who has been given the task can at least get ready. It would be difficult for nurses to do many things daily, like talking to patients and giving them medicine. Also, the person who agreed to do it would need to know about gardening and have the right skills and knowledge." (Female Nurse 3, FGD 2)

Aside from staffing, cooperation within the multidisciplinary team member such as occupational health therapists and doctors must provide appropriate scheduling and timing for the nurses and patients to perform the gardening intervention. It is essential that such scheduling not interfere with the doctor's or other therapists' routine patient interaction and assessment.

"Here in the psychiatry unit, we also need to consider the doctor's schedule and timing as they could come and review patients at random times due to the unpredictability of the unit's daily activity. Sometimes, when we try to bring patients out for their usual garden pass, they may not be allowed to as the doctors need to meet with them. Therefore, we need to settle on a proper date, time, and schedule when it is suitable for both sides to perform their duties without obstructing each other's time." (Male Nurse 2, FGD 2)

Thus, as doctors and nurses are occupied with their tasks, most nurses have suggested a dedicated gardener who can fully commit themselves to the intervention.

"Even in our state, currently dealing with a staff shortage, it would be better to hire a dedicated gardener who is trained and capable of handling the garden to handle this gardening activity. At the same time, the nurses do their routine tasks, especially during the morning when there is typically fewer staff." (Female Nurse 3, FGD 2)

However, some nurses opposed employing a gardener in psychiatric clinical settings due to fears of breach of confidentiality and the sensitivity of the patient's condition. The nurses also voiced concern for the gardener, who may not be trained to face mental health patients, especially during unpredictable situations such as aggression between other patients during gardening.

"I cannot entirely agree with hiring a gardener because we care for patients with mental health issues such as depression, anxiety, and schizophrenia. These conditions are sensitive and must be kept confidential among healthcare professionals only. Gardeners are excellent at gardening but would not know how to deal with aggressive patients; therefore, having the gardeners around may put them in unnecessary danger." (Male Nurse 2, FGD 4).

DISCUSSION

In this study, the nurses have drawn attention to several factors related to the implementation of gardening activities; among the earlier factors include safeness concerns. The consensus was that nurses are responsible for preventing incidents when

patients undertake gardening activities. One of the crucial roles of nurses is creating a safe environment because they are the ones who provide and coordinate most of the patient's care (13). Therefore, mental health nurses must have good clinical decision-making skills for mental health patients, especially when dealing with unsafe behaviours associated with serious mental health problems such as self-harm and depression. In a hospital-based study conducted in Guangdong, China, mental health nurses must collaborate with multidisciplinary team members to provide complete patient assessments. As evident in this current study, a strong emphasis was made on the mental health nurses, alongside practitioners' need to assess and determine the mental capacity of the patients before letting them participate in outdoor gardening activities, especially when such activities involve using gardening tools such as a shovel, hoe, and scissors which has the potential to be hazardous for the patients and the staff members. In Guangdong's mental health settings, proper assessment and decision-making among the multidisciplinary team members are strictly practised as it will improve the quality of care and provide patients with diversified and individualized health care as well as improve the nursing staff's skills in divergent thinking, sense of belonging and overall nursing service (14).

The nurses in this study also mentioned that exposing the patients to the outdoors and performing gardening may have negative implications, such as stress, anger, and frustration. The physical activity of gardening can be exhausting and strenuous, requiring energy, time, patience, and commitment. It is essential for the staff member accompanying the patients to the garden to set realistic expectations to not overwhelm them with tasks and expectations. An achievable goal will allow patients to be more understanding, relaxed, acknowledged, and appreciative of the therapy and experience (15). Patients, especially in mental health settings, need a relaxing atmosphere with minimal stress to shorten their recovery time, improve their health outcomes and prevent relapse or complications of their existing mental illness (16).

One of the risks many nurses brought up during the interview is absconding from patients outdoors. Patient absconding can be caused by neglect, frustration with their situation, disagreement with treatment, and hearing voices, especially among patients with schizophrenia (17). To reduce the risk of absconding, it is crucial for nurses to properly assess the mental status of the patient's profile before letting them go outdoors to do some gardening. Other than assessments before gardening, patients must continually be monitored while performing outdoor activities. Monitoring can be done cooperatively with nurses and other staff members, such as the security guards and assistant staff. Before allowing patients to leave the ward, staff should be aware of all exit points and maintain secure control over them (18).

Meanwhile, maintaining interest among patients and nurses in gardening was another aspect that became a major doubt among the study participants, particularly when many felt that they were required to be familiar with gardening basics, such as tools usage, fertilisers, and maintenance of plants. Patients would be more open to learning from their trusted nurses if they spent enough time and effort building relationships and trust with them (19). Apart from teaching patients about the benefits of gardening for their recovery and mental health, this will facilitate communication between nurses and patients, allowing for a better understanding and assessment of the patient's psychological thought processes, which is a critical step in the recovery process in a mental health setting (20).

In ensuring the sustainability of the activity, the participants described the value of gardening management among the multidisciplinary team, especially in mental health settings where care coordination is key to coordinated, patient-centred care (21). Collaboration between multidisciplinary team members such as doctors, occupational health therapists, psychologists, and nurses will improve teamwork and communication (22). It also allows for an open discussion focusing on a single purpose without having one party fully responsible or preventing one side from dominating or overlapping their duties with the rest of the staff members (22). Since the early 1990s, this

care coordination strategy has been successfully used in mental health settings in the United Kingdom. It is instrumental when dealing with high-risk patients, such as suicidal and aggressive patients within mental health settings (23). High-risk patients have a higher risk of self-harm, harming other patients and staff members, and elevated absconding (24). Therefore, close observation must be implemented to ensure the patients and staff are safe (25). Regular observation will allow nurses to assess and foresee the risk of self-harm, carry out early interventions before patients act on their negative intentions, and calmly and constructively support the patient (26).

Meanwhile, it is important that nurses are able to fulfil their duty consistently and reliably through proper delegation of nurses to supervise the garden (27). In ensuring successful delegation, nurses must trust in one another and be eager to learn and educate one another to increase each other's abilities, trust, and communication within the nursing team (28). Having a dedicated gardener to oversee and maintain the gardens cannot be emphasized. This will ensure the garden is well-maintained under experienced hands (29). The nurses and patients would still be able to perform the gardening with the assistance of the hired gardener while also reducing the responsibility of maintaining the gardening away from the nurses solely, as done in many British hospitals where gardeners are hired to provide an area of relaxation for patients with mental health issues. This study suggests that additional research is needed to fully understand gardening and its possible impact on individuals in psychiatric settings, such as patients, nurses, and other healthcare professionals, particularly in establishing clear guidelines. The guidelines aim to ensure the garden's long-term sustainability as a cornerstone of patient care. The guideline should also reinforce the importance of effective engagement in the garden. Allowing gardening to thrive and be maintained by a diverse group of individuals (30) will alleviate the burden of maintaining the garden by distributing responsibilities to a diverse group of people, as evident in countries such as the United States, Norway, and Iran (31). Integrating modern therapies such as gardening requires careful organisation and planning, particularly when fitting into existing patient care.

LIMITATIONS

The study would be much richer in data if the samples were representatives from different occupations, such as doctors, psychologists, and occupational health therapists, who may see gardening from a different perspective, enhancing the credibility of the findings. The findings were restricted to psychiatric nurses working in a single psychiatric department in Brunei's main hospital. Thus, the findings only apply to the population considered, not all Brunei psychiatric nurses.

CONCLUSION

The participating nurses underlined the perceived challenges of gardening as an element of patient care, with a particular emphasis on maintaining patients' and nurses' respective levels of safety. There is also concern about keeping the patient's interest during the activity, the skills and understanding of the nurses involved, and the clarity of their roles, particularly concerning the coordination of the gardening activities. As a result, it is important to design and enforce a guideline detailing the role that nurses, patients, and other healthcare professionals play in ensuring the long-term viability of the garden as an element of patient care.

CONFLICT OF INTEREST

The author(s) declare there is no conflict of interest present.

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AUTHOR CONTRIBUTIONS

AHZAR: drafted the manuscript and contributes to the concept development and

design of the article through data collection, analysis and data interpretation for the article.
MSHMS: contributes to data collection and data analysis.
YZ: revised the manuscript critically for important intellectual content and approved the final version of the manuscript.

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