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Older patients' participation in physical activity during hospitalization: A qualitative study of ward nurses' perceptions in an Asian context



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ABSTRACT

Maximizing the functional ability of older patients through participation in physical activities during hospitalization could prevent functional decline. This study describes nurses' perceptions of facilitators and barriers to hospitalized older patients' physical activity participation in an acute Asian setting. An exploratory qualitative study employing thematic analysis was used. Semi-structured, audio recorded, focus group interviews on 30 nurses from a hospital in Singapore, were conducted until data saturation. Facilitators included seeing physical activity engagement as a fundamental facet of nursing, drawing social contracts and motivating patients, and engaging a multidisciplinary team approach. Barriers included psychological factors, falls culture, nurses' heavy workload and language impediment. Barriers more unique to the Asian culture were patients' adoption of sick-role behavior, reliance on domestic helpers and social suppositions on paid service. These findings can be used to develop culturally appropriate interventions to promote physical activity participation for patients in acute settings in Asia.

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Introduction

Functional decline, defined as a loss of ability in activities of daily living (ADL), such as grooming, dressing, showering, eating, using the bathroom, is commonly experienced by 28 to 35% of hospitalized

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older adults.^{1,2} The onset of functional decline often precedes hospitalization and potentially worsens through the course of the hospital stay.³ The prognosis of older adults recovering to pre-morbid status is only 30% once they are discharged with new disability in ADL.³ Therefore, it is essential to explore the gaps in functional restoration among Asian older adults, especially when the problem is expected to intensify with the increase in hospitalized older adults as the result of an increasingly ageing population in Asia.^{4,5}

Background

In recent years, a philosophy of care where older patients are engaged at their highest level of ability to reinstate and optimize function and physical independence has gained increasing interest.⁶ This concept, termed as 'function-focused care' by Resnick and colleagues, sought to engage older patients in function and physical

activities such as engagement in ADL, participation in transfers, ambulation, and doing range of motion exercises during all care interactions.^{7–9} Care settings that have adopted such a philosophy of care have reported many benefits including larger improvements in patients' ADL and function, greater physical resilience and less fears in falling.^{8–10} There were also fewer events of delirium and hospital readmissions in hospitalized patients with dementia.⁹ Additionally, a study done in nursing home residents with severe cognitive impairment found that it is safe to engage nursing home residents in physical and functional activities.¹¹

Traditionally, acute settings are essentially designed to deliver fast and efficient treatments, emphasizes on tasks, and may not fully optimize the functional recovery needs of the older adults.¹² Hence, physical activity engagement amongst older adults in acute settings is often overlooked.¹³ It was reported that older hospitalized medical patients stayed in bed more than 80% of time during their acute care stay.¹⁴ A study on older patients after hip fracture found that these patients engaged in very limited physical activity, particularly those that are of moderate-intensity.¹⁵ Past Western studies in assisted living and long term care facilities found that factors that impeded older adults' motivation to physical activity engagement included age-associated impairments, diminished mental capacity, social isolation, unplanned hospitalization, functional decline, falls, unintended weight loss and non-compliance with medications.^{16,17} Other barriers reported in Western studies included nurses' beliefs system, insufficient training, insufficient recognition and support, inadequate staffing, workload concerns, environmental barriers and the culture of care.^{18,19}

Asia is projected to be one of the fastest greying continent, heightening the need to develop culturally appropriate interventions that would optimize hospitalized older patients' participation in physical activity. However, few studies examined physical care engagement in acute settings and it is unclear if findings conducted in Western countries could be generalizable to acute settings in Asia given the differences in settings and cultures. Nurses' familiarity on the propensity of older adult's engagement in physical activity positions them as the main stakeholder in adopting an age-friendly philosophy of care. To facilitate the development and implementation of cultural and context appropriate interventions to promote functionality amongst older patients, it is first vital to identify potential facilitators and barriers from the local nurses' perspective.

Study aim

The aim of this study is to explore nurses' perceptions of older patients' physical activity participation in an acute hospital setting in Singapore.

Methods

Design

This exploratory qualitative study was undertaken in a large 1300 bedded acute hospital in Singapore, to elicit in-depth discovery of insights and information.²⁰ Semi-structured focus group interviews were conducted to explore participants' experiences. Focus groups enabled group dynamics and interaction process to encourage participants to share, confirm or refute their opinions, perceptions and experiences that describe the phenomenon of interest with others in the group.²¹

Participants

Purposive sampling was adopted to illuminate the phenomenon of physical activity engagement among older patients as perceived by nurses. Registered and enrolled ward nurses who have been

providing direct bedside nursing care, and with at least six months of experience in their current wards, were eligible for the study. This was to ensure that participants possessed adequate clinical exposure and role stability to meaningfully reflect on present clinical practice. To permit maximum variation in data, nurses with a wide mix of ages, clinical experiences, education levels and ward specialties were recruited.²²

The study team invited participation during nurses' hand-over sessions. Recruitment was also done via a recruitment poster with the study team's contact details in the tea room and interested nurses were asked to contact the study team directly.

Data collection

Focus group interviews were held between November to December 2014, using a semi-structured interview guide developed from literature review and pilot tested with one focus group. Data from the pilot focus group was excluded from the final analysis.

Sample questions from the interviews included:

- 1 How do you perceive older patients' participation in physical activity?
- 2 What facilitates older patients' participation in physical activity?
- 3 What prevents older patients from participating in physical activity?
- 4 How can nurses better assist older patients to participate in physical activity?

Five focus group interviews, each comprising of four to eight participants, were conducted. Each focus group session was held in a private room within the hospital. The sessions lasted approximately 40 to 60 minutes and were audio-recorded. The same moderator, trained in focus group methods, facilitated each interview sessions. Two note-takers were present during the focus group interviews to record additional notes, non-verbal cues and significant observations of participants not captured by audio recordings. No identifiable information was collected.

Following each session, the study team met to debrief and to share views on emerging themes, group interactions and observations on the group. Emerging themes were incorporated in the interview guide for subsequent interviews. In recognition of the existence of multiple realities, reflexivity was employed throughout the study. A reflective journal was kept to outline team members' perspective of the phenomena and identification of potential biasness, for accurate presentation of participants' views. Audio-recorded interviews were transcribed verbatim with field notes incorporated accordingly.

Data analysis

Data collection and data analysis took place concurrently. This study adopted the theoretical thematic analysis by Braun and Clarke (Table 1).²³ To address potential prejudices, personal assumptions and expectations of the phenomena were consciously compared and contrasted with the findings. The manual coding was undertaken by two independent researchers and compared against one another. The transcripts were repeatedly read and checked against the audio recordings to ensure precision, immersion and understanding of the data. Text segments that illustrated nurses' perspectives on older patients' participation in physical activity were initially color-coded. A general overview of each group's views and reflections were noted. Disagreements between the coders were discussed and constructs were negotiated. Eventual constructs were developed from constant comparison across the floor to unravel patterns and commonalities of the phenomena.²⁴ Similar constructs were refined and condensed into potential themes

Table 1
Stages of data analysis.

Stage	Processes
1. Data immersion	<ul style="list-style-type: none"> • Audio recordings were transcribed verbatim. • Iterative reading of transcribed verbatim against audio recordings. • Preliminary interpretation of transcribed verbatim.
2. Generating initial codes	<ul style="list-style-type: none"> • Segments pertaining to the research aim were manually color-coded.
3. Searching for themes	<ul style="list-style-type: none"> • Abstracting and grouping of similar preliminary codes into constructs.
4. Reviewing themes	<ul style="list-style-type: none"> • Similar constructs were further congregated into potential themes and subthemes. • These were crosschecked with the initial transcripts to ensure authenticity.
5. Defining and naming themes	<ul style="list-style-type: none"> • Potential themes and subthemes were refined to answer the research questions.
6. Integration and critique	<ul style="list-style-type: none"> • Critique of the themes and subthemes among the research team till agreements were reached. • Reported and compared against existing literature.

and subthemes. The emerging themes and subthemes were presented to local experts in geriatrics nursing for feedback. Rich discussions were held to review the data analysis and challenge the emerging findings until consensus was reached. Once no new theme emerged, it was assumed that data saturation had occurred.^{25,26}

Ethical considerations

Ethics approval (DSRB 2014/00736) was granted by the National Healthcare Group Domain Specific Review Board. Written informed consent was obtained. Pseudonyms were given to participants to maintain anonymity.

Trustworthiness of the study

Strategies to enhance rigor were based on the criteria by Lincoln and Guba.²⁷ To strengthen the study's dependability, an interview guide was used and all focus groups were facilitated by the same facilitator. Credibility of the study was achieved through peer review. Confirmability included keeping an audit trail for the research process and keeping a reflexive diary. At the end of every session, a summary of gathered information was checked and confirmed to ascertain accuracy of the interviews. Debriefings following each session further enhanced data quality. The inclusion of description of participants' demographics and verbatim extracts of the interviews facilitated transferability.

Results

The main study recruited 34 registered or enrolled nurses from various general wards in the study hospital, however four nurses did not manage to participate due to clinical demands. The participants' demographic characteristics are presented in Table 2. The majority of the participants were female (28 of the 30 participants). The age of the participants ranged from 22 to 46 years old and on average the participants had worked in their current wards for about 6 years.

80 codes were identified which were reduced to 15 sub-themes and four themes that emerged as key facilitators and barriers to engagement in physical activity (Table 3).

Theme 1. Healthcare professional-based facilitators

Theme 1 describes the factors that facilitated patients' physical activity engagement from nurses' perspectives.

Table 2
Demographic characteristics of participants (N = 30).

Characteristics	N (%) / Mean \pm SD
Age (years)	28.27 \pm 5.99
Sex	
Male	2 (6.7%)
Female	28 (93.3%)
Nationality	
Singaporean/permanent resident	19 (63.3%)
Others	11 (36.7%)
Race	
Chinese	15 (50.0%)
Malay	4 (13.3%)
Indian	5 (16.7%)
Others	6 (20.0%)
Highest education	
Degree and above	21 (70.0%)
Advanced diploma	3 (10.0%)
Diploma	6 (20.0%)
Designation	
Senior staff nurse	8 (26.7%)
Staff nurse	17 (56.7%)
Senior/Enrolled nurse	5 (16.7%)
Current ward specialty	
Geriatrics	11 (36.7%)
Non-geriatrics	19 (63.3%)
Typical number of patients per nurse	
6 – 8	3 (10.0%)
8 – 12	21 (70.0%)
12 – 16	3 (10.0%)
Others	3 (10.0%)
Experience in current ward (years)	5.43 \pm 4.42

Subtheme 1: seeing physical activity as a fundamental facet of nursing

Enabling physical activity was seen as a fundamental facet of nursing with participants unanimously assented to the significance of engaging hospitalized older patients in physical activity to prevent functional decline.

The older patients tend to decondition easily (thus) it is important to encourage them to (perform physical activity)... Once their illnesses are stabilized, as much as possible, we try to help them and to encourage them to perform personal care. [P6_Group4]

Some participants think that physical activity participation will facilitate discharge planning especially for patients who "have no caregivers at home." [P4_Group1] Besides, encouraging patients to

Table 3
Themes and subthemes related to nurses' perceptions of older patients' participation in physical activity.

Themes	Subthemes
Healthcare professional-based facilitators	Seeing physical activity as a fundamental facet of nursing Drawing social contracts and motivating patients Knowing patients' functional ability Engaging a multidisciplinary team approach Premorbid independent state
Patient and family-based facilitators	Family involvements
Patient and family-based barriers	Adoption of 'sick role' behaviors
Hospital-based barriers	Prolonged bed rest Pain and unfamiliar medical devices Psychological barriers Over reliance on domestic helper Social suppositions on paid service Hospital's safety culture on falls Nurses' workload and time constraints Nurse-patient language impediment

perform physical activity such as personal care would relieve nurses' workload, allowing nurses to concentrate on higher acuity patients.

Our workload will be reduced if those who are capable of helping themselves, help themselves. Being so, we could help others who really needed our help. [P1_Group5]

Subtheme 2: drawing social contracts and motivating patients

A nurse-patient social contract was used by some nurses to align expectations on physical activity. Typically, participants tried to incorporate physical activity into daily routines, starting small with simple tasks and increasing the tasks accordingly.

I begin with a social contract, which explains that it's my job as a nurse to help you, but my goal is to get you to help yourself. [P1_Group1]

I involve the patients when doing simple things like toileting or showering. I will assist them to the toilet and they can shower themselves, they can soap and shampoo their hair. During meal time I will encourage them to feed themselves rather than feed them. [P2_Group1]

To motivate patients to participate in physical activity, participants often provided encouragement and incentives.

If you are able to brush your teeth or walk properly, we can get you on the wheelchair to watch television outside... [P4_Group1]

I think it motivates them if nurses tell them: "You can go home if you can do this (physical activity) alone." [P2_Group2]

Subtheme 3: knowing patients' functional ability

Participants shared that knowledge of patients' functional capability built their confidence in enabling physical activity participation. Hence, many participants welcomed the cubicle-based care delivery concept, where each nurse gets to know their patients better as they are assigned to the same cubicle of about six patients for a few days. Besides, the cubicle layout allows better visualization and observation of patients' functional ability and the en-suite toilet in each cubicle provided toileting convenience for the patients to walk to the toilet themselves.

Cubicle nursing allows the continuity of care where I will be in-charge of the same group of patients today, tomorrow and the next few days, and following-up with their progression. This allows me to feel more confidence in engaging patients to do physical activity. [P1_Group1]

Subtheme 4: engaging a multidisciplinary team approach

Participants shared the importance of combined team efforts between nurses, physiotherapists and occupational therapists.

It wasn't just the nurses who were engaging patients in ADLs. It was a lot of support from the physiotherapist and the occupational therapist as well. At times, nurses need to engage the therapists, and through combined efforts patients will be more willing to engage in their own ADLs. [P1_Group1]

The participants added that they often depended on physiotherapists to assist patients to achieve goals in physical activity ambulation as "the best person to assess patients' gait and ambulation is ultimately the physiotherapist, not nurses." [P1_Group1]

Theme 2. Patient and family-based facilitator

Theme 2 illustrates the facilitators of patients' physical activity engagement from patients' and families' perspectives.

Subtheme 1: premorbid independent state

The older adults' premorbid functional ability was often perceived as an influential element centering upon the encouragement of physical activity. Most participants perceived premorbid independent patients as more willing to participate in their physical activity compared to patients who require more functional assistance.

When patients who are premorbid independent in their ADL are admitted to the hospital, they would try to participate in physical activity, like toileting, despite their illness. [P3_Group3]

Subtheme 2: family involvements

Patients with strong family support system were observed to be more active in physical activity which was rationalized as patients desiring to fulfill loved ones' expectations of them to do their best to recover.

Getting their family involved in their care shows that their family cared for them. The patients will anticipate recovery expectations from their family members and be more willing to engage in physical activity to hasten recovery. [P3_Group5]

Theme 3. Patient and family-based barriers

This theme describes the perceived barriers to physical activity participation from the constraints arising from patients and families.

Subtheme 1: adoption of 'sick role' behaviors

Nurses lamented about patients who appeared to have assumed the 'sick role' behaviors as this was seen as a barrier to physical activity. A nurse moaned about patients who do not even want to move their hands, such that someone has to "feed them" and that "they even require nurses to wipe their faces." [P3_Group4]

There are times when I feel that patients have immersed in the sick role such that they thought they are very sick. Actually, they have the capability to participate in their own physical activity. They just needed minimal assistance. [P6_Group4]

Subtheme 2: prolonged bed rest

Some medical conditions required patients to comply with prolonged bed rest which prevented them from engaging in their ADL. One participant gave the example of patients with low platelet who were "instructed to completely rest in bed until the platelet levels go up." [P4_Group2] Unfortunately, some patients developed a sense of reliance on nurses even when they have recovered.

I suppose they find it troublesome to be independent. After all, they have been attended to and served during their whole hospitalization. So when someone suddenly comes and ask them to perform physical activity, they will be like, "No, I want to go back to being assisted." [P4_Group1]

Subtheme 3: pain and unfamiliar medical devices

Pain was highlighted to be a common and important barrier to physical activity participation. A participant explained that "Pain inhibit patients' ability to do their physical activity because it is really distressing." [P3_Group3] Apart from pain, some participants

reckoned that unfamiliar medical devices also discouraged patients from engaging in physical activity as they fear tube dislodgements. A participant working in a surgical ward shared: *“Sometimes when patients return to the ward with a foreign equipment, like a drain, they don’t dare to move or participate in ADL.”* [P5_Group2]

Subtheme 4: psychological barriers

Physical activity was frequently impeded by psychological factors such as phobia of falls emanated from past experiences.

They may have had a fall at home that warranted this admission. Consequently, the phobia is there as they refuse to get out of bed due to the fear of falling again. [P1_Group4]

Participants also highlighted that patients with newly diagnosed medical conditions are passive in ADL. One participant stressed that *“Patients with newly diagnosed medical conditions tend to have low motivation. They are sad, passive and tend to depend on the nurses.”* [P1_Group3]. Additionally, feeling of loneliness by patients without family members or when patients are placed in isolation room prompt patients to *“seek attention by asking for assistance from the nurses.”* [P3_Group3] Other psychological barriers were unfamiliarity with ward’s layout. One participant observed the following: *“Patients will feel more apprehensive to do anything in an unfamiliar environment and they will require more assistance than required.”* [P4_Group1].

Subtheme 5: over-reliance on domestic helper

Participants observed an increasing trend of family members employing domestic helpers to care for their loved ones and encouraging them to rely on these helpers. This can be a barrier to physical activity as illustrated below:

... they are so used to being served that they forgot how to be independent regardless of their functional status. It is, “I have a maid. So why are you making me independent?” [P4_Group1]

Another participant shared that these patients will *“have their helpers at their bedside, so the helpers will do everything for them, including simple feeding.”* [P4_Group1] Moreover, the domestic helpers often perceived that it is their *“job to assist the patients rather than let them be independent.”* [P2_Group2]

Subtheme 6: social suppositions on paid service

Participants had unanimously identified a social expectation on paid service where patients sought help when they could have helped themselves. One participant shared that: *“The patients have the mindset that you have to do everything since they paid for the service.”* [P4_Group5] Participants also spoke of family members with this social supposition that deterred patients from engaging in physical activity: *“We paid for the service, let the nurses do it instead.”* [P4_Group1] Participants added that this caused the patients to be dependent on them.

Some patients can help themselves, but their relatives will ask us to assist them. That’s why most patients in our ward are becomingly dependent on nurses. [P2_Group2]

Occasionally, it was emphasized that nurses were hesitant to advocate for physical activity due to the fear of potential complaints.

Some patients will ask: “Why can’t you do it for me?” Err... Nurses can’t disregard their requests or else they will complain about us. [P2_Group3]

Theme 4. Hospital-based barriers

The last theme uncovers the perceived hospital-based barriers to physical activity participation.

Subtheme 1: hospital’s safety culture on falls

Nurses often perceived older patients to be at risk for falls and acknowledged nurses as a major hindrance in encouraging physical activity participation to avoid fall risks. The fear of patients falling could have been compounded by the understudied hospital’s strong culture of safety for zero falls.

Because of the hospital policies and protocols, we are very worried about fall risks should patients be allowed to participate in physical activity. [P4_Group5]

Every time when patients at high risks of fall started fidgeting by the edge of the bed, we will tell them “Sit down. Don’t get up.” It’s just us being paranoid and we’re not encouraging them to do things themselves. [P5_Group4]

Safety advices such as fall precaution advices also led to passive patients’ behaviors such as patients choosing to wear diapers or use bedside commodes despite being ambulant.

After having communicated the specific fall-risk precautions, the patient didn’t want to walk anymore. He was afraid of falling and getting nurses into trouble. [P3_Group2]

Nurses from non-geriatric settings were perceived as being more risk-averse such that they are more likely to use restraints as a fall prevention strategy. One participant from the geriatric ward queried; *“Why do non-geriatric wards need to restrain patient with unsteady gait, who just wanted to go to the toilet?”* [P3_Group4]

Subtheme 2: nurses’ workload and time constraints

Participants explained nurses’ inability to engage older patients in physical activity due to heavy workloads.

One registered nurse may have to take charge of 10 to 12 patients, with many care plans to follow-up and multidisciplinary teams to coordinate. [P2_Group5]

I’m an enrolled nurse. I typically cover the whole stretch (20 patients), with each cubicle having at least four patients who needs assistance. It has been really difficult for us to manage from the first to last cubicle while seeking time to encourage physical activity. [P3_Group1]

Time constraints were consistent across all the focus groups. One common sentiment was *“Time is always against us. We’re always rushing to achieve our discharge targets, medications...”* [P1_Group1] Consequently, most participants confessed to being task-oriented to complete their tasks quickly, rather than encouraging physical activity which would take longer.

Things can be done faster if we provide total assistance. That’s why we always helped them more than we should. [P1_Group2]

Subtheme 3: nurse-patient language impediment

Many of the participants perceived language barrier as a typical deterrence to the encouragement of physical activity among older patients as these patients mainly conversed in the local languages.

It's more challenging for the foreign nurses. We will have to engage the help of local nurses whom speak the patients' language for clarity. [P3_Group1]

Some participants also deliberated that young local nurses were unable to communicate in local dialects: *"The local younger generation nowadays speaks less Hokkien (local dialect). So we normally converse with our patients in Mandarin (instead of Hokkien). [P4_Group5]*

Discussion

This study explored ward nurses' perceptions of older adults' participation in physical activity during hospitalization and provided important insights of the facilitators and barriers from an Asian context. Four themes were identified: healthcare professional-based facilitators, patient and family-based facilitators, patient and family-based barriers, and hospital-based barriers. Key facilitators included seeing physical activity as a fundamental facet of nursing, drawing social contracts and motivating patients, and engaging a multidisciplinary team approach. Many of the barriers such as fear of falls, inadequate staffing, workload concerns and environmental barriers were similar to barriers reported in past Western studies.^{16–19} Other barriers such as the adoption of sick-role behaviors, psychological factors, reliance on domestic helpers, and social suppositions on paid service are likely more distinctive to an Asian culture.

The participants who acknowledged the importance of nurses' role in patients' physical activity participation tend to engage patients more actively in these activities. Recognition of the importance of physical activity is a crucial first step towards patient engagement¹⁴ and will increase the likelihood of its translation into necessary actions.²⁸ Our findings also suggested that older patients with strong family support and who encouraged patients to be independent were more likely to engage in physical activities. This is not surprising as family has always been a salient feature of Asian culture where family support prevailed as a pillar of motivation and strength for health promotion.^{29,30}

One of the barriers to physical activity uncovered in this study was the patients' assumption of sick role behaviors. The sick role is a form of 'sanctioned deviance' where patients see themselves as ill and exempted themselves from complying with expectations to be active in their own recovery.³¹ Although there is increasing evidence that physical activity participation can improve health outcomes, patients were generally seen as not motivated to engage in physical activity.³² Past studies suggested that it is common for older hospitalized patients to expect themselves to be physically inactive during hospitalization.³³ In our study, culture likely magnified the sick role when one is hospitalized. Additionally, expressions of filial duties and the demands of care needs have led to more local families employing domestic helpers to assist elderly parents.³⁴ Unfortunately, the ensued dependency on domestic helpers framed the older patients into passive recipients of care, which inevitably compromises their physical activity engagements.

Presence of pain among older adults could be a major determinant on physical activity participation that should not be dismissed as an inevitable process of ageing. Previous studies have established that older adults suffering from pain are at high risk of experiencing higher rates of morbidity and healthcare consumption.^{35,36} Regardless, pain can compromise one's quality of life with sleep problems, activity intolerances and higher clinical risks of depression.³⁷ Hence, existence of pain that intensifies with age, frequency or complicated by co-morbidities should be adequately managed.³⁸

In many Asian societies such as Singapore, the healthcare sector is typically seen as a service industry where patients and their families are consumers of the healthcare service they had paid for. Consumers of healthcare services perceived themselves to possess the rights to healthcare services, which includes the right to be served by nurses.³⁹ Consequently, nurses in this study unanimously lamented that their intentions to encourage physical activity participation were not well received due to the public's mentality that nurses' service were being paid for. Additionally, patient's satisfaction, typically used as a proxy quality indicator for the measurement of service standards for hospitals is highly valued by organizations. This may have contributed towards nurses' fear of possible reprehension from dissatisfied patients or their families that discouraged nurses from actively advocating physical activity amongst older patients.

Incidences of falls has been established to be closely associated with advancing age.^{40,41} This may explain the fear of falls in older adults amongst the nurses. Moreover, fall-related anxiety in older adults themselves may pose a psychological barrier on physical activity with the older adults entering a vicious cycle of avoidance in physical activities.^{42,43} Similarly, a study in the USA found that the fear of falling had negatively impacted on the activity level and functionality of older adults.⁴⁴ Interestingly, a review article concluded that there is no evidence for higher risk of adverse events such as falls in older adults, that is associated with physical activity during hospitalization.⁴⁵ Conversely, physical activity has been shown to optimize strength and function which can prevent falls.⁴⁶

An increasing complexity of nursing care commands an optimal nurse-to-patient ratio of 1:4 and 1:16 for day and night shifts respectively.⁴⁷ Nonetheless, the majority of nurses in this study were typically caring for eight to 12 patients each. Nurses in this study may be compelled by such nurse-to-patient ratio to become task-oriented. As engaging older adults in physical activity is often a time-consuming activity, it is not surprised that it is given low priority in a busy environment. Past observation studies found that generally nurses are not focused on patients' performance of physical activity and even when they do this is often limited to patients stand and transfer.⁴⁸ However, it should be noted that nurses are the ones who spend the most time with patients and the failure to engage patients as active participants of their own care has negative consequences.⁴⁹

Effective communication is vital to the provision of quality nursing care, which is an essential aspect of the healing process. Our study found that the presence of language barriers compromises the ability of foreign nurses and young nurses to engage older patients in physical activity. Singapore has an integrated multiracial society with the Chinese being the dominant group. Only 12% of older Chinese habitually spoke English⁵⁰ but the local nursing profession is staffed by many foreign nurses and young nurses conversant only in the English or Mandarin language. It was previously established that patients were generally less receptive to nurses whom did not share a common language,⁵¹ highlighting the importance of effective communication.

Implications for practice

The facilitators and barriers identified in this study could act as guide to improve nurses' engagements with older adults and their families in physical activity participation during hospitalization. It is vital to stress to nurses the importance of their role in educating patients and families on the importance of physical activity. Together with the patients, families, and therapists, nurses could set mutual goals according to patients' physical ability, and build physical care into routines to encourage and empower older patients to engage in physical activity. Nurses could let physical activity goals be part of

discharge preparation and use these goals to motivate patients towards early discharge.

The organization culture also need to be changed to be more 'patient-centric' and with better training of nurses in patient-centered care values and nurse-patient communication skills to support an 'age' friendly culture. Any interventions designed to encourage physical activity participation should consider the local social beliefs and family support system to maximize the potential of the activation of physical activity.⁵² Only when all stakeholders truly share the goal of optimizing functional ability through physical activity engagement can this goal be actualized.

The hospital has since undertaken various system-level initiatives to better engage older patients in their physical activity to promote functional recovery. This included changes to the physical and social environments to better enable an age-friendly environment that would facilitate older patients' participation in physical activity. Under the Nurses Improving Care for Health System Elders (NICHE) program, an older patient-centric care approach was translated and adopted in the hospital.^{53,54} Trainings were conducted to equip nurses with the skills and knowledge to optimize older patients' independence in physical activity. Mutual goal settings with patients on ADL engagements were initiated whenever possible. Additionally, an elder sit program where local volunteers assist and accompany older patients in their ADL was also instituted. Volunteers proficient in various local languages also acted as language translators for foreign nurses. Additionally, in-house language courses are available to ease language barriers.

A lack of existing literature convenes for a qualitative study to explore nurses' perception of physical activity participation among older patients in an acute Asian context. The qualitative methodology allowed in-depth insights to nurses' perspectives on this topic. We used maximum variation sampling and deliberately interviewed nurses from different wards such that the findings may be representative of nurses in Singapore. Since our participants were largely registered nurses, the views of enrolled nurses may have been under-represented. The findings also may differ in a different geographical context due to cultural and social differences.

Future studies may wish to explore if our findings are similar to other acute settings. Furthermore, the perceptions on the facilitators and barriers of older patients and that of their families could be another area of future focus. Future studies may wish to consider triangulating data gathered using multiple methods to provide a richer understanding of the phenomenon. Future studies on interventions designed to facilitate physical activity engagements are needed.

Conclusion

With the rapidly ageing population contributing to an increasing number of hospitalized older patients, it is critical to consider a more age-friendly care model. While nurses acknowledged the importance of engaging the older patients in physical activity, presenting challenges have inhibited them from enabling this. Culturally appropriate strategies at the organizational and individual levels are required to invigorate nurses to optimize physical activity participation among older patients. To cultivate such an environment, all key stakeholders including nurse leaders, ward nurses, patients and families, and therapists, must recognize the importance of physical activity participation and work together towards achieving this goal.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.gerinurse.2018.07.002.

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