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## Original Article

## The experience of transition from nursing students to newly graduated registered nurses in Singapore

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## ABSTRACT

**Objectives:** To investigate the experience of newly graduated registered nurses (NGRNs) in Singapore following their initial 6–12 months of transition from nursing student to registered nurse.

**Methods:** This mixed-methods study consisted of two phases. In the first phase, data were collected via the administration of the online survey to 30 NGRNs. The questionnaire contained 42 items of the four-point Likert scale survey. In the second phase, a focus group interview was conducted with 5 NGRNs to gather complementary information regarding the major findings from the first phase.

**Results:** The survey revealed despite most NGRNs (80%) in this study expressed overall satisfied with their transition, the item score was (2.97±0.61) out of 4, the majority (83.3%) also perceived their transition to professional practice being stressful, the item score was (3.07±0.74) out of 4. Three themes emerged from the interview, 'personal transition experience', 'professional transition experience', and 'organizational transition experience', which are entwined to construct overall NGRNs' transition experiences.

**Conclusions:** This study reaffirms the theory-practice gap phenomenon. This signifies the need for closer collaboration between educational, healthcare industry and regulatory stakeholders to examine and address factors that influence their transition experience to better support them for workforce readiness.

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## What is known?

- This study echoes with the findings of the existing wider literature that newly graduated registered nurses (NGRNs) experience stress during their transition to professional practice, hence further supports the concept of the theory-practice gap.

## What is new?

- This study revealed three unique findings surrounding negative transition experiences by NGRNs in Singapore. Firstly, NGRNs resented over not gaining respect from patients and members of the public due to being stigmatized as new and inexperienced nurses. Secondly, negative transition also precipitated by presences of ethnicity/racial cliques that impaired NGRNs' ability to acculturate to their working environment. Thirdly, NGRNs also

faced pressurized stress induced by the need to undergo transition to avoid consequences such as repatriation and repayment of liquated damage owing to sponsorship bond.

- This study recommends the need for closer collaboration between nursing faculties and healthcare institutions in Singapore to plan more focused transition programs that will better accounts for and be responsive to NGRNs experiences and needs.

## 1. Introduction

This paper reports the findings of a mixed-method study investigating the experience of transition from nursing student to registered nurse in Singapore. While there is considerable international literature reporting on the transition experience of newly graduating registered nurses (NGRNs), the Singapore context is arguably different from western countries. The impetus for this study draws on the concept that different cultural practices can significantly vary NGRNs' transition experience [1]. Potential variation then raises the question of whether international literature

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can be applied to the local context, given the differences and peculiarities of the Singapore nursing and health systems.

The first six months of transition marks the most critical period for professional adjustment for NGRNs [2,3]. The transition experience hence serves as a decisive factor in potentially driving their professional commitment to their nursing career. To date, the availability of studies examining the experience of transition from nursing student to registered nurse in Singapore were limited. A lack of understanding of this aspect from the local context gives rise to questions about whether the existing transition support system truly matches, reflects, and supports the needs and expectations of local NGRNs [4]. This study offers a platform for NGRNs in Singapore to voice their experiences and expectations of transition. The overall significance of this study seeks to inform the body of knowledge about NGRN transition that is unique and grounded from the Singapore perspectives.

Transition from nursing student to registered nurse is akin to what Van Gennep described as a rite of passage [5]. Delaney explains this process as “starting with an ending, followed by a period of confusion and distress, and leading to a new beginning” [6]. While feeling excited and elated initially, their experience as NGRNs had later manifested into feelings of bewilderment, fear, disillusion, doubt, and inadequacy [5,7–9]. This phenomenon was known as ‘reality shock’ [10,11]. This is because they are confronted with expectations and responsibilities not previously experienced, hence give rise to feelings of vulnerability, insecurity, inadequacy, and incompetence [7,8,12]. NGRNs also experience a mismatch between the level of responsibility they held as nursing students and their level of responsibility as registered nurses [13,14]. They reported struggling with the need to manage various aspects of new and higher levels of responsibilities such as decision making, managerial skills, higher caseload and patient acuity [4,15]. Compounding this issue are unrealistic expectations placed on them by their colleagues and supervisors, who demand them to ‘hit the ground running’, implying they should be able to seamlessly transit to their new roles and deliver work performance comparable with their more experienced colleagues [16,17]. Besides, NGRNs also experience a clash between their idealistic view of nursing and the reality of professional practice [8,9,16,18]. The practice setting and hence their transition experience can be perceived as conflicting threatening and overwhelming.

Indeed, these feelings give rise to a negative transition experience and potentially manifest into a state of professional dissatisfaction and career disillusionment [13,19]. At a personal level, NGRNs experience stress because they confronted with their changed or changing professional identity and relationships. Transition begins with NGRNs first moving out of their previous comfort zone from a somewhat sheltered educational setting whereby they were shielded from multiple realities. This is followed by having to commence practice in a relatively new working environment that delineates the need for them to undertake higher levels of accountability and responsibility. At the professional level, NGRNs felt overwhelmed by the need to manage unfamiliar duties that reflect heightened responsibilities and accountabilities, and it is the experience of it that triggers stress. Their increased and increasing pressure gives rise to self-doubt about their competence. Despite being confident in their theoretical knowledge upon graduation, they experience increasing apprehension over their ability to apply that knowledge in practice [20–22]. At the organizational level, NGRNs also struggle to reconcile with the dichotomy of knowledge and skills proficiency level between what they had possessed and what was expected of them by their healthcare institutions. This further exacerbates their feeling of stress due to being overwhelmed by the need to adjust to increased responsibilities and accountabilities being assigned to them [4,23].

Likewise, they desire and value acceptance, acknowledgment and recognition from their colleagues; in other words, they are very much into socializing or ‘fitting in’ into their new working environment and culture [24–26].

The need to advocate a positive transition experience is pivotal as studies revealed how a negative experience precipitates a high attrition rate among NGRNs within their first year of practice [27–29]. It is within the initial crucial three to six months of transition that NGRNs decide to either commit to or leave the profession [6,30]. This study aims to gain a better understanding of the experience of transition from nursing student to registered nurse from the Singapore perspective. This study seeks to answer these research questions: 1) How do NGRNs in Singapore experience transition from nursing student to registered nurse? 2) What are the factor(s) that impacted on their transition experience? 3) Are there unique features of NGRN transition in Singapore?

## 2. Methods

### 2.1. Study design

This study used a sequential mixed-method approach with two distinct but linear phases: quantitative and qualitative [31]. This design was appropriate for this study because it neither pledge conformity to any paradigmatic viewpoint nor is confined to any methodological root [32], and it does not omit its interpretative obligation [33]. Data collection for this study involves two phases. The first phase involves descriptive quantitative design through the administration of a questionnaire to examine NGRNs’ transition experience. In the second phase, the use of descriptive qualitative design was supported through a focus group interview. This approach not only permits flexibility and unrestricted studying of NGRNs’ transition experiences, it also obviates any preconceived influence pertaining to the description of findings by researchers to eliminate biases, a term known as bracketing [33].

### 2.2. Ethical consideration

This study was approved by the University of Sydney Human Research Ethics Committee (HREC) (Project number:2016/269), following approval in writing was sought from the Polytechnic for granting data collection. The identity of all participants who participate in both the online survey and focus group were kept anonymous. All five interviewees will be named from P1 to P5 during the reporting of their quotes in this study. All participants were issued with a downloadable participant information statement (PIS) via the email they were being reached to explicitly describes the study. Written informed consent was obtained from interviewees who took part in the focus group.

### 2.3. The first phase

#### 2.3.1. Participants

This study utilized purposive sampling with participants recruited from the alumni database of a local polytechnic that offers pre-registration nursing education in Singapore. Potential participants were reached out through an email generated from the alumni database containing detailed information about this study, as well as the identity and contact details of both researchers to further inquiry. The following inclusion criteria applied to eligible participants; 1) must complete a pre-registration nursing programme in Singapore within the last 12–24 months, 2) be currently practicing as a registered nurse, and 3) must have at least 6–24 months post-registration experience. Once eligibility for inclusion in the study was established, participants were directed to the

online link to the questionnaire to complete the survey.

### 2.3.2. Data collection

The first stage of data collection involved the collection of quantitative data through an online survey. This questionnaire contains three sections that examine NGRN's transition experience was specially developed for this study to suit the Singapore context. The survey was deployed to participants ( $n=219$ ) who remained contactable through valid email stored in the polytechnic alumni database, and also had met the inclusion criteria for this study. The targeted number of participants was based on appropriate statistical sampling size calculations. They were generally representative of the 2015 graduating cohort of the Diploma in Nursing programme ( $n=417$ ) who were first screened for eligibility to participate in this study.

### 2.3.3. Measures

The first section of the questionnaire involved collecting participant's demographic data with anonymity. This section is to gain better insight into individual participant's professional backgrounds to determine their eligibility for this study according to its inclusion criteria. The second and third sections of the questionnaire contained 42 items of the four-point Likert scale survey. Section two of the instrument named 'transition experience' comprise of 31 questionnaire items to survey on participants' transition experience from nursing students to registered nurse. Section three named 'experience of pre-registration consolidation programme' consists of 11 questionnaire items to survey participants' experience of their pre-registration consolidation programme (PRCP). The term 'PRCP' implies the final clinical placement that occurs in the acute hospital setting, which all nursing students in Singapore will undergo during the final year of their nursing education programme.

To establish content validity, a review was sought from a panel of five experts. The panel entails two local academics from one nursing faculty in Singapore and three experienced clinicians from various healthcare organizations in Singapore. The qualification of all experts ranged from Master's degree to Ph.D. degree, and they had more than 10 years of experience in clinical nursing and clinical supervision of nursing students. The instrument yielded a scale content validity index, averaging calculation method ( $S-CVI/Ave$ ) of 1.00, following modification of some items based on the panel's recommendation [34,35]. A pilot study was also conducted to evaluate internal consistency reliability and homogeneity of items within the subsection of the instrument. Section two of the instrument 'transition experience' had yielded Cronbach's  $\alpha$  of 0.81. Section three of the instrument 'experience of pre-registration consolidation programme' yielded Cronbach's  $\alpha$  of 0.74.

### 2.3.4. Data analysis

Statistical Package of Social Science (SPSS) version 19.0 was utilized to analyze the quantitative survey data using mode, mean, and standard deviation and tabulated to display the frequency of responses and the level of agreement on each item of the questionnaire [38,39].

## 2.4. The second phase

### 2.4.1. Participants

At the end of the questionnaire, consent was sought from participants who volunteer to participate in the focus group interview. Five participants who had completed the survey during first phase of the study had expressed their wish to engage in the focus group interview. They were informed four weeks in advance of the date, time, and location for the interview.

### 2.4.2. Data collection

The focus group interview was conducted in one of the classrooms at the Singapore Institute of Management, the school of the first author (MWJW). The whole interview lasted for 90 min, with the session being recorded through audio-taping and note-taking. The discussion was facilitated and moderated by the first author (MWJW), who begins by introducing himself as a research student undertaking his Bachelor of Nursing (Honours). A detailed explanation was provided to the interviewees on the purpose of conducting this study as part of his honor's dissertation. The first author (MWJW) had undergone his intensive research training organized by his university and two mock interview sessions with his academic supervisor and second author (SAN). This is to prepare himself adequately for the actual focus group discussion to ensure quality of the interview. The interview was supported by an interview guide that contains few grand tour questions such as, "describe to me what it is like being a new graduate commencing practice as a beginning registered nurse?" This was aimed to stimulate initial discussion with subsequent questions elicited based on participants' responses, or any new issues that arose during the discussion. The use of a questionnaire and focus group enables data collection at two levels: 1) naïve and 2) narrative or deeper data [36]. Focus group enabled extension, qualification, and clarification of quantitative data to gain an in-depth understanding of questionnaire responses [31,37].

### 2.4.3. Data analysis

The focus group interview was transcribed verbatim. The survey data were analyzed together with qualitative data from field notes and audio recordings using both manifest and latent content analysis framework [40]. Manifest content analysis implies describing elements of data that are visible and tangible, while latent content analysis involves uncovering the underlying meaning of the existing phenomenon. In this study, manifest content analysis was undertaken on the questionnaire data using descriptive statistics, and latent content analysis was performed on the focus group interview data.

Following verbatim transcription, focus group interview data were identified, coded and categorized into 'meaning units'. This implies classifying and clustering recurrent patterns of findings and words that convey similarity or a relationship by their content or context [40]. The next step involved condensing the meaning units to reduce its comprehensiveness while to retain its underlying meaning [40]. All condensed meaning units were then interpreted, matched and further grouped to form sub-categories. They were further reviewed to unify them under a main heading or theme.

### 2.4.4. Rigorousness and trustworthiness of interview data

This study utilized the consolidated criteria for reporting qualitative research (COREQ) to guide reporting [41]. Four aspects of trustworthiness, namely, credibility, confirmability, dependability, and transferability, were also established to enhance rigor in the qualitative aspect of this study [42]. Firstly, verification of codes by interviewees was performed through member checking to ensure the precision of data reporting. Secondly, the findings of the survey were discussed and validated with those from the focus group interview during both stages of data collection and analysis. Secondly, the first author (MWJW) performs coding, analyzing, and categorizing of data. The second author (SAN) further checks and confirms the quotes to reach consensus on the decision of allocating and matching of findings to sub-categories and categories respectively. These approaches support both person and by-methods triangulation to enhance credibility and confirmability [40,42,43].

Thirdly, an audit trail that documents the course of actions, such

as decisions towards coding, analyzing, categorizing, and reporting of study findings were maintained. This initiative supports dependability [44,45]. Lastly, to improve transferability of the data, description and interpretation of results by the authors were sufficiently represented by interviewees' verbatim quotes.

### 3. Results

#### 3.1. The first phase

A total of 30 participants responded to the online survey in this study and five volunteered to participate in the focus group discussion. All participants were female, with majority ( $n=24$ ) in the 20–25 years age group, while some ( $n=5$ ) were in the 26–30 age group and only one from the 31–35 age group (Table 1). As indicated in Table 1, most participants ( $n=29$ ) reported they had to serve an educational bond as means of repaying their nursing education sponsorship, with the serving duration varies; two years ( $n=4$ ), three years ( $n=16$ ), and more than three years ( $n=9$ ). All participants had completed a pre-registration nursing programme in Singapore. Most participants ( $n=26$ ) completed a Diploma in Nursing, while four attained a Bachelor of Nursing degree from a local university. The four participants were recruited using snowball sampling through their acquaintances, who were also participants of this study and had fulfilled the inclusion criteria of this research.

Only survey findings of all 31 items in section two 'transition experience' will be reported in this paper (Table 2), given its relevance and applicability to the topic of this paper. Overall, most participants ( $n=24$ ) expressed satisfaction over their transition experience as NGRNs (item 31) ( $2.97 \pm 0.61$ ). Relevant questionnaire items will be reported and discussed with reference to the findings of the focus group interview, as reflected by each theme. This would facilitate between-method triangulation to permit cross-checking of both quantitative and qualitative data to enhance the breadth and depth of understanding of the study findings.

**Table 1**  
Descriptive and professional characteristics of NGRNs participating in the survey ( $n = 30$ ).

| Characteristics  | <i>n</i> | %    |
|--|----------|------|
| Educational status                                     |          |      |
| Diploma in nursing                                     | 26       | 86.7 |
| Bachelor degree of nursing                             | 4        | 13.3 |
| Age (years)  |          |      |
| 20–25  | 24       | 80.0 |
| 26–30  | 5        | 16.7 |
| 31–35  | 1        | 3.3  |
| Country of citizenship                                 |          |      |
| Singapore  | 14       | 46.7 |
| Malaysia   | 8        | 26.7 |
| Myanmar  | 2        | 6.7  |
| The Philippines  | 2        | 6.7  |
| People's Republic of China                             | 4        | 13.3 |
| Employment status                                      |          |      |
| Singapore citizen                                      | 14       | 46.7 |
| Singapore permanent residents                          | 4        | 13.3 |
| Employment pass  | 2        | 6.7  |
| S Pass*  | 10       | 33.3 |
| Educational sponsorship bond                           |          |      |
| Yes  | 29       | 96.7 |
| No   | 1        | 3.3  |
| Duration of sponsorship bond to be served ( $n = 29$ ) |          |      |
| 2 years  | 4        | 13.8 |
| 3 years  | 16       | 55.2 |
| More than 3 years                                      | 9        | 31.0 |

Note:NGRNs: newly graduated registered nurses.\*S Pass is a type of employment pass in Singapore that was issued to eligible mid-skilled technical staff.

#### 3.2. The second phase

Content analysis and categorizing of data from the focus group interview yielded three main themes, 1) personal transition experience, 2) professional transition experience, and, 3) organizational transition experience. Each theme comprises of various interrelated sub-categories that encompasses a comprehensive understanding of how NGRNs perceived their transition and various factors that impacted this experience. An example that outlines the process of deriving decision of categorizing interview findings into sub-categories, sub-themes and themes were displayed in Table 3.

##### 3.2.1. Personal transition experience

The first category of personal transition experience reflects on how NGRNs reported and voiced out their perception of undergoing their transition to professional practice upon their graduation. This category was underpinned by various sub-categories that reflect how factors, such as their level of experience, knowledge, and confidence would impact their personal transition experience.

**3.2.1.1. Transition stress: inexperience, knowledge deficit and confidence.** Most participants ( $n=25$ ) indicated that their transition experience from nursing student to registered nurse was stressful (item 19). When asking to clarify such discrepancy between survey findings, the interviewees had attributed their stress to a lack of experience and self-perceived knowledge deficit, which eroded their confidence.

*"Stressful, yes...because of lack of experience, affects my confidence of giving care. unsure if this is what I'm supposed to do or what's expected."* (P3)

*"I think it's the problem of experience sometimes. Experience. Yes, that's why I'm not so confident in applying theory to practice, even [though] I learn something in the school."* (P4)

While most ( $n=18$ ) believed their level of knowledge had prepared them for their registered nurse role (item 15), 63.3% ( $n=19$ ) yet reported confidence loss in their level of knowledge (item 7). This discrepancy was clarified by interviewees ( $n=3$ ) who acknowledged that they felt their knowledge gained from their pre-registration nursing education was adequate; they were not confident to handle various unfamiliarized responsibilities being assigned to them as registered nurses during transition. These were exemplified by communicating with physicians, interpretation of pathology investigation results and clinical diagnostic reports.

*"It's not the communication part that I'm fear, I feel that I don't have enough knowledge to communicate with the doctor. I don't have clear picture of what they plan to do with the patient."* (P3)

*"I think it's the communication part I'm not so confident because my knowledge is not enough to support me to bring out my confidence in analyzing all these [laboratory & diagnostic investigation] results."* (P4)

Despite their initial crises of confidence, most interviewees ( $n=4$ ) cited how time had helped them to assimilate into their workplace and boost their confidence level subsequently. This enables them to perform those tasks with which they had initially struggled.

*"Because after 1 year, I had more confidence in talking to the doctors as I have enough experience already and sometimes once they order things, I can understand what they want as I have the*

**Table 2**  
Mean score of questionnaire response by participants.

| Items   | Mean $\pm$ SD   |
|---|-----------------|
| 6. My preceptor/mentor was a positive influence in my transition.   | 3.10 $\pm$ 0.71 |
| 19. I found my transition experience from nursing student to registered nurse stressful.  | 3.07 $\pm$ 0.74 |
| 3. The orientation programme offered by my unit/department was helpful.   | 3.00 $\pm$ 0.37 |
| 1. I received adequate support from my colleagues.  | 2.97 $\pm$ 0.56 |
| 31. I feel satisfied with my transition to my role as a registered nurse.   | 2.97 $\pm$ 0.61 |
| 4. I feel the duration of my orientation programme offered by my unit/department was sufficient.  | 2.93 $\pm$ 0.52 |
| 9. I was made to feel part of the nursing team in my unit/department/ward.  | 2.93 $\pm$ 0.52 |
| 2. My ward/department created a positive work experience for me.  | 2.90 $\pm$ 0.61 |
| 20. I felt capable of identifying my limitations as a new registered nurse.   | 2.90 $\pm$ 0.40 |
| 10. My immediate supervisors were a positive influence in my transition.  | 2.87 $\pm$ 0.68 |
| 13. I received appropriate advice to facilitate my transition from nursing student to registered nurse.                                 | 2.83 $\pm$ 0.46 |
| 27. The level of responsibilities expected of me matched my capabilities.   | 2.83 $\pm$ 0.46 |
| 14. During my orientation programme I was given enough opportunities to consolidate my skills and knowledge to help with my transition. | 2.77 $\pm$ 0.50 |
| 17. My contribution to the ward/unit/department was valued.   | 2.73 $\pm$ 0.52 |
| 28. I was given adequate time to adjust to my new role as a registered nurse.   | 2.73 $\pm$ 0.69 |
| 22. I was happy with the level of expectation placed on me during my transition.  | 2.70 $\pm$ 0.47 |
| 30. I was given enough opportunity to discuss my expectations and needs during my transition.   | 2.63 $\pm$ 0.72 |
| 25. I felt competent to manage the workload assigned to me during my transition.  | 2.47 $\pm$ 0.73 |
| 26. I was not exposed to enough different situations/scenarios during my transition to prepare me for my role.                          | 2.47 $\pm$ 0.82 |
| 15. My level of knowledge upon graduation did not prepare me for my role as a new registered nurse.                                     | 2.43 $\pm$ 0.68 |
| 18. I did not receive enough constructive feedback regarding my performance.  | 2.33 $\pm$ 0.61 |
| 5. Fitting into my new role as a registered nurse was easy.   | 2.30 $\pm$ 0.75 |
| 7. I was confident with my level of knowledge when I begin my role as a registered nurse  | 2.30 $\pm$ 0.60 |
| 11. The expectations I had as a student about being a registered nurse matched my actual experiences.                                   | 2.30 $\pm$ 0.65 |
| 21. I had limited opportunity to apply what I had learned during my diploma/degree to my work as a registered nurse.                    | 2.30 $\pm$ 0.65 |
| 12. I did not feel valued in the workplace.   | 2.27 $\pm$ 0.69 |
| 24. I was not emotionally and psychologically prepared for my role as a registered nurse.   | 2.27 $\pm$ 0.74 |
| 8. The expectations placed on me during my transition were not realistic.   | 2.20 $\pm$ 0.76 |
| 29. I did not feel that I fitted in with the ward/department/unit.  | 2.20 $\pm$ 0.76 |
| 23. I did not receive adequate support from immediate supervisors.  | 2.07 $\pm$ 0.58 |
| 16. I did not receive adequate support from my preceptor/mentor.  | 2.00 $\pm$ 0.64 |

**Table 3**  
Example of the analysis.

| Theme                          | Sub-theme  | Sub-categories  | Meaning units represented by participants' quotes  |
|--------------------------------|--|---|--|
| Personal transition experience | 1. Transition stress: inexperience, knowledge deficit and confidence | Concerns with lack of knowledge and skills owing to lack of clinical experiences. | "I think it's the problem of experience sometimes. Experience. Yes, that's why I'm not so confident in applying theory to practice, even [though] I learn something in the school."  |
|                                | 2. The Experience of Being 'New'                                     | The label of a novice practitioner.   | "The stress part is how the public see us as the probation nurse. Because for us right, we have a green sticker on our nametag to indicate we're the new nurses that's coming into the ward. So, the public they will know that I don't know, not sure how they know but see us as not really experienced nurse, they will question us what we would do. So, that's the sad part. Quite stressful for us, for them to see us quite differently." |

*experience already & more confidence in advocate for my patient. I think experience helps."* (P2)

**3.2.1.2. The experience of being 'new'.** Participants shared their experience of being regarded as new, associated with their uniform label, symbolizing that they were 'new' and under probation. This label further led them to be stigmatized by both patients and relatives. They did not perceive them as qualified nurses, hence displaying a lack of confidence in their ability, as evidenced by questioning their actions when performing patient care.

*"The stress part is how the public sees us as the probation nurse. Because for us right, we have a green sticker on our nametag to indicate we're the new nurses that are coming into the ward. So, the public they will know that I don't know, not sure how they know but see us as not really experienced nurse, they will question us what we would do. So, that's the sad part. Quite stressful for us, for them to see us quite differently."* (P3)

### 3.2.2. Professional transition experience

The second category of professional transition experience was made up of various sub-categories that reflects the disparity of professional expectations required of NGRNs to reconcile. This would impact on their ability towards transition, owing to theory to practice gaps.

**3.2.2.1. Skills performance: preparation versus practice.** 66.7% of participants ( $n=20$ ) strongly disagreed with the questionnaire statement that "The expectations I had as a student about being a registered nurse matched my actual experiences" (item 11). Clarification was further sought with two interviewees who had highlighted their most salient concern was the need to engage in autonomous practice and increased accountabilities. They perceived the responsibilities held as nursing students and their initial expectations of the roles of the registered nurses were at odds with the real experiences they encountered. They informed how this difference was premised upon being assigned to perform tasks that constitute a higher level of responsibilities that were extended beyond their scope of practices and competency level.

*"I think still back to the responsibilities. Even if student nurse you take case right, anything goes wrong we will still approach the staff nurse. We won't straight away to the doctors but now when we transition to registered nurse then if anything goes wrong, we straightaway approach to the doctor."* (P2)

*"I expect it, but I don't know that it will be so heavy, the responsibilities... e.g. patient safety, if you give one wrong medication, then the patient might have adverse event or anything, you are doing it all alone without people beside you. Because student time you still always accompany the staff nurse to do things. So, when you're a staff nurse, you're doing it alone"* (P1)

Two interviewees attributed their response to the expectations placed on them to perform clinical skills independently and skills that were specifically related to the specialized field of nursing in their department. They, however, did acknowledge how they perceived these specialized skills were too advanced to be included in their general curriculum. They expressed concerned over the demand to commence practice independently in specialized areas, and this constituted additional stress during their transition.

*"Not everything in ward we learn in school, e.g. 'trache[ostomy]', and they expect us to know, like what type of 'trache[ostomy]' ... school never teach us all these but they expect us to know as I'm in the 'resp[iratory]' ward. Also, "BiPAP" [Bilevel Positive Airway Pressure], "CPAP" [Continuous Positive Airways Pressure], all these we don't know how to put on the patient, we've never [learned] in school and they never teach us how to use."* (P1)

*"Because sometimes what they think and what we think is totally different. They think you ought to do all these things because this is all basics to them... for us, these things are specialized in that area. It's not general to us."* (P2)

**3.2.2.2. Confronting with theory to practice gap.** Only 53.3% ( $n=16$ ) felt competent in managing the workload assigned to them during transition (item 25). Most interviewees ( $n=4$ ) explained that this is due to the omission of teaching some clinical skills during their education and this concerned them. The clinical skills were intravenous cannulation and venepuncture which two interviewees had identified to be significant because it was expected of them to know as part of their registered nurse role. Not able to perform these skills owing to lack of education and clinical exposure had led them to seek help from their experienced colleagues. This subsequently manifested into feelings of frustration and leading them to reflect and question the quality and adequacy of nursing education they received. One interviewee described how her experienced colleagues were less tolerant over her limitations, and had considered these skills as 'basic', yet were contradicted to NGRN's current competency level because they were not being taught to them as nursing students previously.

*"I am quite "query", because in a ward level right, actually all of us need to do the cannulation and blood taking [venepuncture] but I do not know why we didn't learn it during our school time...but I really in my doubt, how come cannulation and blood taking cannot be done in school?"* (P4)

Three interviewees described how they felt their nursing education did not reflect the reality of practice because of the different values and expectations required held by educational and health-care sectors. One interviewee revealed how during transition, they were expected by their immediate supervisor to be proficient in

undertaking higher levels of responsibilities that were less familiar to them. Such ambiguity was explained by another interviewee saying that while the expectation placed on them by their lecturer might be pitched lower because they were students, the expectation of them by their supervisor was being elevated to reflect a change of professional identity.

*"When I'm a student nurse, I'm expected to take for 5 cases... So when I passed out [graduated from nursing school], I was told I'm just expected to take more because that's just reality."* (P2)

*"I remember on my first day of when I am stepping in the ward, my [nurse] manager tell me, this is not going, you're being expected more than PRCP, this is not going to be easy for you."* (P3)

*"I think the school should stop hiding the reality of being a RN. They should match the expectation that we're facing when we're in a clinical service. Because what we're expected to be is mostly being told by the lecturers in school. But when we in the clinical area, the expectation is being told by our manager. Whether we pass [probation] or not is their decision."* (P3)

**3.2.2.3. Expected to work efficiently.** Interviewees ( $n=3$ ) described how they were expected by their department to complete their tasks fast and within a specified timeframe. One interviewee revealed how this expectation formed one of the prescribed competency assessments benchmarked by their departmental supervisor to determine the NGRNs' ability to pass their probation.

*"For me I need to take care of 8 to 10 patients and how they assess me is whether I can do my work timely, finish my work timely... So, if my managers don't think that I'm not competent, so they will mark me down ..."* (P3)

### 3.2.3. Organizational transition experience

The third category of organizational transition experience reports on how the quality of transition experienced by NGRNs and their ability to assimilate and socialize into their workplace was impacted by factors concerning workplace cultures and practices as represented by various sub-categories.

**3.2.3.1. Less than a collegial working environment.** Most participants ( $n=25$ ) felt they were made to feel part of their nursing team in their department (item 9). Interviewees ( $n=2$ ) elaborated on how they were made to feel part of their team by being invited to departmental events and receiving encouragement from their colleagues. One interviewee shared how she felt appreciated when her immediate supervisor showed concerned over her work progression.

*"I did felt valued. My nurse manager would come to me and ask me weekly, how am I doing, how am I coping... It's like she values all her staff."* (P3)

Two interviewees, however, explained how they had to reconcile with the reality of unfriendly organizational culture. They shared one situation whereby they were expected to be acknowledged by their colleagues on the first day of work but felt dejected when they were ignored. One interviewee acknowledged how this feeling had jeopardized her ability to adapt to her new working environment.

*“At least say hi. At least when we walk pass, we would smile, but then some [colleagues] just walk pass and didn't really acknowledge us.” (P1)*

Another interviewee highlighted how fitting in was difficult, owing to the harsh tone of communication engaged by her experienced colleagues towards her. She perceived such tone would imply as showing less patient and tolerant of her for being new and inexperienced.

*They welcome me but subsequently when they start teaching, the [operating] theatre high stress level place to work, so most of them don't talk very nicely... They weren't really angry with me. But at that time when they teach me and when they want to talk to me, I feel like they are ordering me all the time...the way they talk to me it's not like a casual talk, it's like questioning me.” (P5)*

She eventually came to terms with this unpleasant experience when she later witnessed her newer colleagues also encountering similar experiences. This led her to realize that such behavior was entrenched within the cultural environment of her workplace, in the operating theatre.

Less desirable workplace culture was also revealed by another interviewee who attributed it to the existence of cliques among colleagues. All interviewees acknowledged having encountered cliques and expressed disapproval of this practice. Interviewees ( $n = 2$ ) expressed concerns over clique formation, as any personal differences between factions would conflict with official nursing duties, further deviated team collaboration. One interviewee revealed how she felt isolated by a clique when she was assigned different shift duties from her preceptor who was part of another clique. This had indirectly embroiled her into conflicts between cohesive groups, resulting in her to be challenged and questioned by them of her ability.

*“There are days when I'm not with preceptors, so other cliques will [think] that...I'm not really functioning well...These kinds of little arguments. This kind of politics. So I don't think forming cliques is really a good sign.” (P3)*

Another two interviewees further shared how cliques were formed based on ethnicities. They resented this because members of racial cliques were communicating using their own languages, even in the handover between nursing shifts, causing language barriers between nursing staff.

*“Sometimes they talk with their own language. Sometimes pass reports they also talk with their own language. Then I very angry ... I feel like I'm the outsider, I don't understand what they say.” (P1)*

Less positive working environment was further illustrated when interviewees ( $n=2$ ) described not being willing to seek advice from their experienced colleagues during their transition. They verbalized fear of being chastised by them for not being prepared for their role as registered nurses.

*“If like some staff nurses you don't know them, and you scared that whether they will scold you when you ask them questions, they will say, ‘Like this also you don't know? What are you doing during your school period?’” (P1)*

*“Sometimes when you're working your senior who is very fierce. Haven't even started work, their face already very black ... They [staff nurses] only know how to scold you and never really help you*

*to improve. Then I scared being scolded by them, that's why I feel very stress going to work.” (P2)*

**3.2.3.2. Adequacy of organizational support and preceptorship.** The questionnaire statement 'My preceptor/mentor was a positive influence in my transition' yielded a high level of agreement from participants ( $n=26$ ) (item 6). Two interviewees shared how they appreciated the support gained from their preceptors. This was exemplified by offering positive reinforcement periodically as means of motivating them; spending time to guide them; and, offering them support in learning to assume accountabilities and responsibilities of their new role.

*“I think what my preceptor has done well is she is able to tell me what I did well and what I did not. And what I did well, she do give me praise and what I did not, she make sure I know the reason why I shouldn't and let me know what is the correct one. And I'm appreciate also she always be there with me and do not throw me alone when I do something wrong ...” (P3)*

In contrast, one interviewee discussed her experience of negative preceptorship encounter in which she worked different shifts from her assigned preceptor, leaving her support to the general pool of registered nurses, which lead to inconsistency of learning.

*“I was just hoping that the preceptor can be with me. If it didn't happen, so the stresses come when one individual would teach a different style, which is not acceptable to the second one. Then when the second one walks away, the third one will come in check my things, not correct, will change everything again. So then it becomes very stressful ...” (P5)*

Interviewees ( $n=2$ ) also shared their view pertaining to attributes they would prefer their preceptors to exhibit. These included having preceptors available for debriefing following a shift to facilitate learning, as well as engaging in constructive feedback that specifically addresses their learning needs, as well as acknowledging their feelings and concerns.

*“But I would agree that it [feedback] has to be two ways. It would be good if the preceptor would listen to us also. It would be really nice that they're being trained to listen to.” (P5)*

**3.2.3.3. The impact of probation and sponsorship bonding.** All interviewees in the focus group had expressed concerns over their performance during transition and the impact on their probationary report, further employment and their bonding arrangements. They expressed experiencing high levels of stress over their potential inability to reconcile the shift in expectations of their performance during probation and the amount of time offered to assimilate into the registered nurse role. Failure to do so implied they could fail their probation, and this raised the consequences of being terminated. For international students, it also meant cancellation of their work passes and repatriation to her home country. This was exacerbated by the fact that they would need to repay costs associated with their educational sponsorship bond.

*“Maybe it's the consequences if I do not pass the probation. So, it will stress me for, to be competent within this timeframe. So, if not I have to be, like some of my friends are being sent back to the country because cannot pass the probation.” (P4)*

#### 4. Discussion

Despite NGRNs expressing overall satisfaction with their transition experience, this study also revealed that they felt varying levels of stress due to their perceived knowledge deficit and lack of experience. They articulated their inexperience as both a lack of clinical skills required for the delivery of patient care, but also their ability and confidence to deal with new responsibilities, such as communicating with patients/relatives, medical officers, and interpretation of laboratory and diagnostic investigation results. These findings resonate with previous studies, reporting that while NGRNs were familiarized with the responsibilities exposed to them as nursing students previously, their changed role and hence shifted in their familiar reference points during transition had accounted for their increased stress level [16,18,20,21].

This study also revealed NGRNs' inability to come to grips with their altered professional identity. This was because their past student environment shielded them from the full breadth of registered nurse responsibilities in a 'real world' practice. Consequently, their stress was exacerbated by the realization that their roles and responsibilities as registered nurses were far more complex and with greater consequences than what they understood or experienced as nursing students. This finding concurred with earlier studies that described this phenomenon as 'sheltered student life' [7,9], with Meleis et al. posited that individuals struggled to reconcile the dichotomy between anticipated and actual experiences of their changed roles and responsibilities [18].

The findings of this study also reflect those of other studies reporting that NGRNs experienced stress because healthcare organizations had expected them to be work-ready upon transition, and their stress levels were intensified for those transitioning in a specialized area [1,15]. While NGRNs in this study initially felt that their education had adequately prepared them for their future role as registered nurses, they reported struggling with performing various specialized skills expected by their department because of the lack of opportunity for hands-on practice of these skills during their nursing education. Concomitantly, the findings of this study also point to workplace culture/environment as a source of stress and dissatisfaction, particularly when NGRNs were exposed to unsupportive, oppressive and abrasive cultures (horizontal violence). In this environment, NGRNs were reluctant to ask questions or seek help because they fear being admonished or having their education belittled. This echoes with other studies which described this phenomenon as being 'thrown in at the deep end' to explain situations where experienced colleagues were unwilling to support NGRNs to learn their new responsibilities [4], and even displaying hostility over their proficiency level [46,47]. Because of this, NGRNs struggle or 'fumble along' with the need to reconcile and keep up with expected performance, which further undermined their confidence level and heightened their stress level [48].

NGRNs in this study perceived 'not knowing' as a weakness, and their inability to perform certain clinical skills caused them to feel inadequate. This raises their doubt and led them to question the adequacy of preparation they acquired through their pre-registration education. This finding echoes with those of earlier studies where knowledge and skill deficit seriously eroded NGRNs' confidence in both their educational preparation and subsequent competence, escalated their stress during transition [15,25,49]. As nursing is a practice discipline, clinical placements hence constitute a form of apprenticeship training that permits application of classroom theories to clinical practice in preparing them well for transition [23]. It is recommended for nursing faculty to cultivate a sense of active and positive learning attitude among nursing students towards all clinical placements to meet their clinical learning

objectives. Education providers should not be made solely responsible for 'job-ready' NGRNs [29]. The demand placed on NGRNs by healthcare industries in expecting them to become proficient practitioners during transition would constitute as an impractical expectation. It is also recommended for nursing faculty to inform nursing students that education programmes cannot prepare them with every skill they are required to perform upon commencing practice. Creating such awareness would better prepare nursing students emotionally and psychologically on what to expect during their transition to NGRNs, to mitigate reality shock.

There are three unique findings of this study which differentiates it from the published literature. The first is that NGRNs' 'newness' is trumpeted by wearing labels that specifically distinguish them from other RNs. In the Singapore context, this process is considered to permit NGRNs to be identified and thus further supported. However, NGRNs had perceived this label as a form of stigmatization that signifies their deficiency of knowledge and experience. They had resented on being questioned about their level of knowledge and skills by patients, relatives, and colleagues. At the same time, their newness led them to being ignored by patients and relatives in favor of a more experienced colleague. This further eroded their confidence and feelings of being accepted, which in turn heightening their stress.

Echoed with earlier studies, NGRNs in this study also yearned for "fitting in", implies the ability to socialize to their department and their culture [24,26]. Their ability to do so was challenged by the presence of racial cliques, which reflects the second unique finding of this study. While the implication of clique formation towards transition experience was previously reported [4], this phenomenon affiliating to ethnicities yet is a distinct feature of nursing and the wider healthcare in Singapore, owing to its ethnically diverse groups. NGRNs in this study resented feeling outcaste and isolated by these cliques because they attribute impaired communication to language differences, and hence barrier. NGRNs view such practice as having to discourage them from actively participating and contributing to the delivery of nursing care, which is pivotal for their learning during transition, whilst this notion would disconnect them from the nursing team altogether, impedes "fitting in".

The third unique finding of this study is participants' concerns over 'failing probation' or unsuccessful transition to professional practice within the stipulated timeframe and its two consequences concerning educational sponsorship bond and repatriation. Sponsorship bond is a key factor differentiating nursing in Singapore from that in Western countries. It is a unique feature practiced in certain countries in Asia such as, Singapore where local health institutions offered scholarships to fund some local and most overseas nursing students in pursuing their pre-registration nursing education [50]. In return, nurses are required to work for the sponsoring body for stipulated periods ranging from three to six years following their graduation, which failing to fulfill their bond lead them to liable to compensate for liquidated damages to their sponsoring institutions. In view of this, Barrientos, Kothari & Phillips, highlighted that this implies sponsored employees would not necessarily have the means to freely leave the organization [51], with Frantz further cautioning any possibility that the sponsoring organizations might obviate the necessity to sensitively and adequately address and advocate specific needs of the employees of the bonded workforce [52]. In the case of nursing, however, this might contribute to less positive transition experiences for NGRNs [53]. The consequence for all sponsored NGRNs, including in this study, is that failing to pass their probation can lead to the demand to repay the costs of their sponsorship bond. This constitutes a prohibitive expense for most NGRNs and would lead to economic hardship for them and/or their families. Besides, the ramification of

failing probation is heightened for NGRNs from overseas because their work passes will be revoked when they no longer hold employment in a local healthcare institution, thus rendering their ineligibility to continue residing in Singapore.

## 5. Limitation

This study is limited by the smaller sample size ( $n=30$ ) due to recruitment from one polytechnic and four participants from another local university that were recruited through snowball sampling, as well as one focus group session that contained five participants who were willing to volunteer to participate in this study. For the quantitative aspect of this study, survey findings of 30 participants are unlikely to represent the transition experience of all NGRNs in Singapore adequately. Further research is required to gain larger participation, with recruitment from the remaining two major nursing schools. Nevertheless, the findings of this study also highlight the need for further investigation into the impact of organizational environments, probation and bonding on NGRN transition in Singapore.

## 6. Conclusions and recommendations

This study complements existing literature that transition is stressful for NGRNs given they move out of the 'sheltered' student environment and are required to adopt a new professional identity. While transition is seen as a period of vulnerability, the nursing profession and more significantly, the wider healthcare industry is compelled to better understand and manage the transition experience. This is because the quality of the transition experience is integral not only to NGRNs' ability to provide safe and quality patient care but also to their immediate and long-term decisions to commit to the nursing profession. This calls for closer collaboration between education providers and health industry partners to better prepare and support NGRNs before and during transition. Firstly, it is imperative for nursing faculties to actively seek input from healthcare industries to revise and align their prescribed curriculum that would meet current clinical demands and core skills proficiencies required of contemporary practice settings. Secondly, nursing faculties could also consider incorporating more training hours for simulation-based learning into their curriculum. Stimulation-based training entails exposing nursing students to various real-life clinical scenarios and having to train them to handle these situations in a safe, yet realistic learning environment. Faculties could work with healthcare industries to develop authentic case scenarios as part of the curriculum design to better prepare them to work in realistic clinical settings. Thirdly, nursing faculties could work with healthcare industries to explore possibilities of offering nursing students with placement to designated specialized units, in which they are either interested or being assigned to work in the future. This opportunity may be provided as part of or total duration of their final clinical placement before their graduation. This could be seen as one initiative of curriculum redesigning to facilitate consolidation of basic skills and taking into consideration that additional time is needed for the acquisition of various specialized skills not taught at the pre-registration level.

It is also instrumental for the healthcare industry to display greater cognizance of the level of knowledge and skills possessed by NGRNs and adopt realistic expectations of their capabilities and better support their needs. It is imperative for nursing management to advocate for a more positive transition environment that supports NGRNs' psychological well-being, and that nurse managers at the unit level look to more focused transition programs that account for and are responsive to NGRNs' transition needs, thus enhancing NGRNs' job satisfaction, leading to effective transition

and retention as well as safe and quality patient care.

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## Conflicts of interest

The authors have no conflicts of interest to declare.

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## Appendix A. Supplementary data

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