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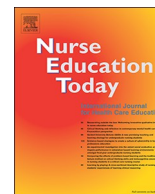
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Gerontological nurse teachers' abilities and influence on students' willingness in older people nursing: A cross-sectional, correlational survey



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ABSTRACT

Background: Previous studies have focused on identifying the factors hindering nursing students' interest in gerontology careers, whereas others have suggested interventions to promote students' interest in older people nursing. However, the role of a teacher is equally vital in shaping students' career preference.

Objective: This study therefore explored students' perspectives of their gerontological nurse teachers' abilities and its association with students' willingness to work in older people nursing.

Design: A cross-sectional correlation study.

Setting: Five Universities of Applied Sciences in Finland.

Participants: Undergraduate nursing students ($N = 243$).

Method: A self-administered survey using the Gerontological Nurse Teacher Scale (GeNTS) and the subscale (Willingness) of the Students' Interest in Nursing Older People Scale (SINOPS). Descriptive and inferential analysis were conducted using SPSS.

Results: There was a moderate positive association ($R = 0.25$, $N = 243$, $p = 0.000$) between students' perspectives of their gerontological nurse teachers' abilities and students' willingness to work in older people nursing. The teachers' abilities to develop gerontological nursing course most influence students' willingness in older people nursing ($r = 0.26$, $p = 0.001$), whereas their knowledge and interest in gerontology, least influenced students' willingness in older people nursing ($r = 0.14$, $p = 0.025$). Also, the teachers abilities to address students' concerns about aging, promote gerontology careers, and demonstrate leadership skills in gerontology all had a similar statistically significant moderate positive association ($r = 0.23$, $p = 0.001$) with students' willingness to work in older people nursing.

Conclusion: Faculty need to ensure that there is adequate personal with expertise in gerontological nursing to advocate for resources to establish a reputable gerontological nursing profile in nursing curriculum and to develop and sustain a positive attitude towards older people nursing among students and staff. A qualitative study is needed to understand the reasons behind students' ratings.

1. Introduction

The current and future demand for Registered Nurses to care for older people with lost or limited ability to live independently is well documented (Swanlund and Kujath, 2012; WHO, 2014). However, there is substantial lack of willingness among nursing students' to choose a career in gerontological nursing. (Garbrah et al., 2017). It is presumed that nursing students' lack of interest in care of older people in long term care settings is related to nursing curriculums as focusing on acute and critical care (Duggan et al., 2013; King et al., 2013). Also, students' lack of interest in older people nursing is attributed to the lack of respected role models who are enthusiastic, skillful and

knowledgeable about issues related to older people to administer gerontological nursing (Garbrah et al., 2017; Koskinen et al., 2012). Furthermore, nursing students' lack of interest in older people nursing is associated with a perceived lack of possibilities for career advancement in gerontological nursing (Ben et al., 2015; Haron et al., 2013; Stevens, 2011).

Certainly, the nurse teacher plays a significant role in nurturing students' professional growth (Del Prato, 2013; Klunklin et al., 2011; Nouri et al., 2013). Particularly, the impression that gerontological nurse teachers create in the minds of their students has the tendency to influence students' interest in older people nursing (Ben et al., 2015). In some settings, the nurse teacher as role model is expected to act as

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students' parents, who assume the responsibility of facilitating students' moral development (Nouri et al., 2013). They are also presumed to provide emotional, spiritual, and intellectual support to their students. (Klunklin et al., 2011). Furthermore, demonstrating enthusiasm for gerontological nursing practice and a positive attitude towards teaching nursing care of older people are significant characteristics that the gerontological nurse teacher must retain (Garbrah et al., 2017; Koskinen et al., 2012)

Keeping in mind the importance of a teacher in shaping the career preference of their students, it is imperative to understand how nursing students perceive the abilities of their gerontological nurse teachers and how these perceptions influence students' interest in older people nursing. Previous studies have played a vital role in identifying the factors hindering nursing students' interest in gerontology careers (Algozo et al., 2016; Ben et al., 2015; Garbrah et al., 2017; Neville et al., 2014). Others have also suggested interventions to facilitate students' interest in older people nursing (Baumbusch et al., 2012; Hwang et al., 2014; Reitmaier et al., 2014). Whereas it is important to establish the hindering and promoting factors, it is equally significant to understand how nursing students perceive the abilities of the gerontological nurse teachers who are expected to promote and sustain students' interest in older people nursing. This study, therefore, aimed at exploring nursing students' perspectives of their gerontological nurse teachers' abilities and its association with students' willingness to work in older people nursing.

2. Background

The nurse teacher has multiple and complex role. Their expertise is expected to include demonstrating leadership and cultural skills, possessing pedagogical competence; and grasping modern technological tools for teaching and learning. Again, the nurse teacher is expected to have clinical clearance, and evidence of scholarly activities (Bono-Neri, 2019; Zlatanovic et al., 2016).

Embedded in the role of the nurse teacher is to exhibit leadership and cultural competence (Klunklin et al., 2011; de Swardt et al., 2017; Ibrahim and Qalawa, 2015). Such leadership role may include developing standards for good practice, identifying learning needs, and determining the scope of training for nurses. (Adams, 2013). They must also, exhibit ethical and moral characteristics imitable for students (Del Prato, 2013, Klunklin et al., 2011; Nouri et al., 2013; de Swardt et al., 2017). More so, it is imperative for nursing faculties to train nurses who are culturally competent to serve the ever-changing multicultural clients. Therefore, it has become significant for a nurse teacher to not only include cultural diversity training in their curriculums, but also demonstrate cultural competence and sensitivity for their students to emulate (Ume-Nwagbo, 2012).

The nurse teacher is expected to apply pedagogical skills that can develop students' critical thinking and reasoning (de Swardt et al., 2017). It is generally perceived that, the ways by which the nurse teacher assumes their responsibilities as specialists and authority influence the teaching and learning process. Therefore nurse teachers need to develop their pedagogical skills to enhance how the students learn. The nurse teacher, therefore, ought to explore innovative strategies to ensure that ever-changing students with diverse backgrounds and learning styles maximize their potentials (Chilemba and Bruce, 2015; de Swardt et al., 2017).

The increased use of modern technology-based teaching tools to facilitate teaching and learning should encourage the nurse teacher rethink how learning happens in the 21st century (Felicilda-Reynaldo and Utley, 2015; Nguyen et al., 2011; Opreescu et al., 2017). There is clear indication that teaching is moving from the usual face-to-face to a technologically driving approach (Nguyen et al., 2011). Additionally, the current healthcare system requires contemporary nurses to be abreast with the use of technology. Although the hands-on skills remain essential to nursing training, it is insufficient condition in the current

era (Petit Dit Dariel et al., 2013).

To be successful, the nurse teacher is expected to maintain clinical competence because nursing is viewed as a practical profession where the hands-on skills are important (Pennbrant, 2016; Salminen et al., 2013). The fact that the nurse teacher is a former nurse, make their situation unique. Although they might not necessarily work anymore as bedside nurses, they are expected to maintain an up to date clinical credibility (Pennbrant, 2016). Bono-Neri (2019), suggests that, the nurse teacher is required to use "reflective practice". They must reflect on their positive and negative experiences from both clinical settings and academia in facilitating teaching and learning (Bono-Neri, 2019). Gustafsson et al. (2015) on the other hand, concluded that integrating theory and practice should be driven by the ability to apply knowledge to practice. Thus, understanding the practicalities of issue under consideration can help the nurse teacher identify a suitable theory that can be applied (Gustafsson et al., 2015).

Nursing, once mainly a practical profession driven by apprenticeships in hospitals, has shifted to the field of academia. Due to the academicalization of the nursing profession, the nurse teacher is required to attain a second degree and pedagogical training in many countries (Bono-Neri, 2019). Increasingly, it is becoming desirable for nurse educators to possess a doctorate to develop a research profile and to take leadership role in nursing academia (Jackson, 2009).

3. Purpose of the study

To explore nursing students' perspectives of their gerontological nurse teachers' abilities and its association with the students' willingness in older people nursing.

4. Methodology

4.1. Design

A cross-sectional correlational electronic study, using the Gerontological Nurse Teacher Scale (GeNTS) and the subscale (Willingness) of the Students' Interest in Nursing Older People Scale by Koskinen (2016).

4.2. Instruments

Two instruments were used to collect the data. Students' perspective of gerontological nurse teachers' abilities, was measured using the Gerontological Nurse Teacher Scale [(GeNTS) Garbrah et al., 2020 (accepted for production)]. The GeNTS consist of 33 positive worded task statements describing gerontological nurse teachers' abilities in facilitating students' interest in older people nursing. The 33 items are divided into six sub-scales with four to seven items under each sub-scale (Table 2). The items are assessed by using a five-point Likert scale ranging, from 1 (completely disagree) to 5 (completely agree).

Also, students' interest in older people nursing was assessed using the subscale (Willingness) of the Students' Interest in Nursing Older People Scale (SINOPS) by Koskinen (2016). The Willingness sub-scale of SINOPS consist of six items which is scored on visual analogue scale ranging from 0 (completely disagree) to 100 (completely agree). A higher score indicated more willingness in older people nursing. The Social demographic variables included students' age, gender, students' academic year, students' previous work experience with older people, and previous education in health and/or social services.

4.3. Participants, data collection and ethical consideration

Following the ethical requirements by the Finnish Advisory Board on Research Integrity (2012), all twenty-one Universities of Applied Sciences (UAS) in Finland that offered degree programme in nursing, were approached from research permission. Nine granted us research

permission, out of which five were involved in the pilot study and therefore this study consisted of undergraduate nursing students who had taken gerontological nursing course in five Universities of Applied Sciences in Finland. Having obtained research permission, a link to the survey was sent to the students through an e-mail via representatives in the various institutions (Gerrish and Lacey, 2013; World medical Association, 2018). The purpose and requirements of the study was explained to the institutions and the students. Each participant consented to participate voluntarily in the study, and they could withdraw from the study without any explanation (Finnish Advisory Board on Research Integrity, 2012; World medical Association, 2018). Data was received anonymously and stored on a computer with a secured password (General Data Protection Regulation, 2018).

Per the information from the representatives, the survey was sent to 2351 students in five (UAS) of whom 302 responded but only $n = 243$, (10.3%) participants fully answered to all items in the scales and are therefore included in this study. The data collection was done through Webropol 2.0 electronic survey from March 2019 to May 2019. The survey was opened for two weeks at each institution. Two reminders were sent during the two weeks. The survey was reopened for one more week to recruit more participants to the study.

4.4. Data analysis

Descriptive statistics were used to describe the distribution of the sociodemographic variables. To be able to correctly interpret the students' perspectives of their gerontological nurse teachers' abilities using the GeNTS, the mean sum variables were calculated by summing up the values for each answer and dividing the sum by the number of items under each sub-scale and for whole scale (Table 1). Similarly, students' willingness in older people nursing was calculated by the mean sum variables of Willingness sub-scale of SINOPS by summing up the values for each answer and dividing the sum by the number of items.

The mean difference between two groups was tested using a *t*-test when the dependent variable was an interval scale. A comparison among multiple groups was tested using a one-way ANOVA and post hoc test. Inferential analysis was then conducted to investigate the association between gerontological nurse teachers' abilities (GeNTS) and students' willingness in older people nursing (SINOPS). To establish direction and effect of the relationship, Pearson *r* was calculated. All statistical significance were determined at 0.005. For internal consistency, Cronbach's alpha (Table 1) for the whole scale was 0.94 and ranged from 0.76 to 0.87 for the six sub-scales of the GeNTS (Kim and Mallory, 2017). The analysis was done using Statistical Pack for Social Science (SPSS) software version 25.

5. Results

5.1. Students' demographic variables and influence on gerontological nurse teachers' abilities (GeNTS)

Table 2 indicates that, majority 214 (88.1%) of the participants were female. The age of the students ranged between 20 and 57 years old (mean 29). The academic year of the participants were 1st year 22 (9.1%), 2nd year 85 (35%), 3rd year 101 (41.6%), and 4th year 35 (14.4%). Majority 179 (73.7%) of the students had previously worked with older people whereas slightly more than half 127 (52.3%) had previous education in social and/or healthcare. Majority of them 175 (72%) had not lived in the same house with an older person. 133 (54%) indicated that they were willing to live in the same house with an older person.

In general (Table 1) the students somewhat agreed that their teachers have the abilities to facilitate students interest in older people nursing ($M = 3.16$, $SD = 0.86$). Also, the students awarded their teachers' knowledge and interest in gerontology the highest mean sum variable ($M = 3.58$, $SD = 0.83$). On the other hand, teachers' abilities

to develop gerontological nursing course, was awarded the least mean sum variable ($M = 2.72$, $SD = 0.95$). The students' willingness in older people nursing was rather low ($M = 35.08$, $SD = 24.83$). Students willingness to work in older people nursing later in their career was rated the highest ($M = 43.24$, $SD = 31.49$). On the other hand, "I knew already when applying that I want to work in older people nursing" was rated the lowest mean score ($M = 23.11$, $SD = 26.62$).

According to the results in Table 2, students' academic year showed a statistically significant difference ($p = 0.06$) about their perspectives of their gerontological nurse teachers' abilities. One-way ANOVA and post hoc test showed that first year students rated their gerontological nurse teachers' abilities higher compared to 2nd ($p = 0.004$) and 3rd year ($p = 0.008$) students but no statistically difference between 1st and 4th year students' ($P = 0.157$). Also, a *t*-test indicated that, student who were willing to live with older people perceived their teachers' abilities higher than their counterparts who were not ($P = 0.014$). But no significant difference was observed between students' perception of their teachers' abilities with students' gender, previous work experience with older people, and previous education in social and/or healthcare. (Table 2).

5.2. Association between gerontological nurse teachers' abilities (GeNTS) and students' willingness to work in older people nursing (SINOPS)

Largely, Table 3 indicate that, there was a moderate positive association ($R = 0.25$, $N = 243$, $p = 0.000$) between gerontological nurse teachers' abilities (GeNTS) and students' willingness in older people nursing (SINOPS). Based on Pearson's correlation coefficient (Table 3), gerontological nurse teachers' abilities to develop gerontological nursing course most influence students' willingness in older people nursing ($r = 0.26$, $p = 0.001$), whereas teachers' knowledge and interest in gerontology, least influenced students' willingness in older people nursing ($r = 0.14$, $p = 0.025$). On the other hand, the teachers abilities to address students' concerns about aging, to promote gerontology careers, and to demonstrate leadership skills in gerontology all exhibited a similar statistically significant moderate positive association ($r = 0.23$, $p = 0.001$) with students' willingness in older people nursing.

Although the students perception about their teachers' knowledge and interest in gerontology was the highest ($M = 3.158$, $SD = 0.83$) mean sum variable (Table 2), it had the least influence ($r = 0.143$, $p = 0.025$) on students' willingness in older people nursing (Table 3). On the other hand, whereas, the students' the perception of their teachers' abilities to develop gerontological nursing course, was the lowest ($M = 2.72$, $SD = 0.95$) mean sum variable, (Table 2), it most influenced students' willingness in older people nursing (Table 3).

6. Discussion

6.1. Implication of the results to nursing education

The current study reveals that first year students had a more positive perception towards their gerontological nurse teachers' abilities compared to their senior cohort. Supported by previous studies, it appears that nursing students who had just begun their studies were generally interested in gerontological nursing but their willingness dwindled as they progressed along the academic ladder (Carlson and Idvall, 2015; Henderson et al., 2008; Stevens, 2011; Zisberg et al., 2015). While acknowledging the importance of this observation, it should be viewed in mind that first year students might have limited knowledge and exposure to nursing faculty and the curriculum, and therefore might not have a fair judgement of their gerontological nursing teachers' abilities.

The results of this study further indicate that gerontological nurse teachers' abilities to facilitate students' interest in older people nursing had a moderate positive influence on students' willingness in older people nursing. It is puzzling however to notice that, the teachers'

Table 1
Factor loading, means sum variables and SD of the GeNTS sub-scales with Cronbach's alpha.

| Sun-scales and items ^a | Factor loading | Mean sum variable (SD) | Cronbach's α |
|---|----------------|------------------------|---------------------|
| Mean sum variables related to knowledge and interest in gerontology | | 3,58 (0,91) | 0.83 |
| Demonstrates a broad view in gerontological nursing theory | 0.56 | | |
| Demonstrates confidence in gerontological nursing practice | 0.66 | | |
| Utilizes research in gerontological nursing course | 0.36 | | |
| Is informed about current issues related to older people | 0.80 | | |
| Demonstrates interest in teaching gerontological nursing | 0.73 | | |
| Promotes the image of gerontological nursing | 0.62 | | |
| Communicates his/her personal positive experiences in gerontological nursing | 0.59 | | |
| Mean sum variables related to leadership in gerontology | | 3.42 (1.05) | 0.87 |
| Creates a positive learning environment | 0.60 | | |
| Exhibits ethical and moral characteristics in issues related to older people | 0.79 | | |
| Acts as a role model for nursing students | 0.67 | | |
| Treat students with respect and dignity | 0.78 | | |
| Inspires students to take up careers in gerontological nursing | 0.58 | | |
| Champions the cause of older people | 0.56 | | |
| Mean sum variables related to addressing students' concerns | | 3.22 (0.92) | 0.82 |
| Increases students' empathy towards older people | 0.31 | | |
| Provides knowledge about memory disorders and aging process | 0.62 | | |
| Addresses students' possible concerns about aging | 0.40 | | |
| Addresses students' possible concerns about aging | 0.44 | | |
| Mean sum variables related to developing gerontological nursing clinical placement | | 3,00 (0.97) | 0.81 |
| Emphasizes nurses' responsibilities in gerontological nursing | 0.37 | | |
| Supports students during gerontological nursing practical training | 0.66 | | |
| Support students' mentors during gerontological nursing practical training | 0.66 | | |
| Cooperate with stakeholders to improve gerontological nursing clinical placement | 0.58 | | |
| Mean sum variables related to promoting gerontological nursing career | | 2.88 (0,99) | 0.84 |
| Emphasizes the potentials of careers in gerontological nursing | 0.64 | | |
| Emphasizes the possibilities of job satisfaction in a gerontological nursing career | 0.76 | | |
| Emphasizes the possibilities for professional growth in gerontological nursing career | 0.55 | | |
| Highlights the benefits involved in gerontological nursing career | 0.67 | | |
| Emphasizes the demands for nurses in gerontological nursing | 0.37 | | |
| Demonstrates enthusiasm in gerontological nursing careers | 0.45 | | |
| Mean sum variables related to developing gerontological Nursing course | | 2.72 (0,95) | 0.76 |
| Utilizes technology in gerontological nursing course | 0.58 | | |
| Utilizes simulations to help students to understand what being an older person feels like | 0.71 | | |
| Utilizes older adults as education partners | 0.74 | | |
| Utilizes working life partners as education partners | 0.76 | | |
| Emphasizes the importance of cultural diversity issues in aging | 0.44 | | |
| Supports individual students with diverse backgrounds | 0.30 | | |
| Total | | 3.16 (0.86) | 0.94 |

^a Mean: 1 = completely disagree, 2 = disagree, 3 = somewhat agree, 4 = agree, 5 = completely agree.

Table 2
Correlation between students' demographic variables and gerontological nurse teachers' abilities (GeNTS): $N = 331$.

| | n (%) | Group mean (SD) | p |
|------------------------------------|------------|-----------------|-------|
| Academic year ^a | | | 0.006 |
| 1st year | 22 (9.1) | 3.73 (0.55) | |
| 2nd year | 85 (35) | 3.04 (0.88) | 0.004 |
| 3rd year | 101 (41.6) | 3.09 (0.82) | 0.008 |
| 4th year | 35 (14.4) | 3.25 (0.90) | 0.157 |
| Gender | | | 0.250 |
| Female | 214 (88.1) | 3.17 (0.84) | |
| Male | 29 (11.9) | 2.98 (0.89) | |
| Age | | | 0.604 |
| ≤ 25 years | 85 (35) | 3.12 (0.78) | |
| ≥ 26 years | 130 (53.5) | 3.18 (0.87) | |
| Missing | 28 (11.5) | | |
| Work experience with old people | | | 0.281 |
| Yes | 179 (73.7) | 3.12 (0.86) | |
| No | 64 (26.3) | 3.25 (0.83) | |
| Previous social/healthcare studies | | | 0.724 |
| Yes | 127 (52.3) | 3.13 (0.87) | |
| No | 116 (47.7) | 3.17 (0.84) | |
| Ever lived with older person | | | 0.686 |
| Yes | 68 (28) | 3.12 (0.910) | |
| No | 175 (72) | 3.16 (0.83) | |
| Willing to live with older person | | | 0.014 |
| Yes | 133 (54.7) | 3.27 (0.84) | |
| No | 110 (45.3) | 3.0 (0.85) | |

^a One-way ANOVA.

abilities that most influence students' willingness in older people nursing, were rated lower by the students. For instance, teachers' abilities to develop gerontological nursing course has the most significant influence on students' willingness to work in older people nursing. However, this was rated the lowest mean sum variable. These results indicate the need for nursing faculty, to ensure that there is adequate personal who are knowledgeable and enthusiastic about issues related to older people nursing to teach gerontological nursing to enhance students' willingness in older people nursing (Koskinen et al., 2012). Particularly, the current study support Henry et al. (2011) observation that the use of different kinds of simulations such as games could increase students understanding and empathy towards older people, and potentially increase their willingness in older people nursing. This study further endorse previous studies that urge teachers to take cognizant of modern technological tools to make the teaching and learning of gerontological nursing more interesting (Felicilda-Reynaldo and Utley, 2015; Nguyen et al., 2011; Oprescu et al., 2017). In accordance with Carlson and Idvall (2015) conclusion, the current study found the need for nursing faculty to engage stakeholders such as specialist in gerontology and older people as educational partners to boost students' willingness in older people nursing.

Similarly, the current study is in accordance with previous studies calling for gerontological nurse teachers to demonstrate leadership in gerontology in order to facilitate students' willingness in older people nursing (Ibrahim and Qalawa, 2015; Duggan et al., 2013; Koskinen et al., 2012). This can be done by portraying themselves as good

Table 3
Association between gerontological nurse teachers' abilities (GeNTS sub-scales) and students' willingness in older people nursing (SINOPS)-most to least influential.

| Mean sum variables of the GeNTS | The subscale (willingness) of the SINOPS | | | I am interested in working in OPN right after graduation | | | I will possibly work in OPN later on my career | | | I am interested in working in outpatient care (e.g., home health care) | | | I am interested in working in inpatient care (nursing home, health centre ward) | | | I knew already when applying that I want to work in OPN. | | | My interest in OPN has increased as studies have progressed | | | Correlations between mean sum variables of GeNTS and SINOPS | | | | | |
|---|--|-------|--|--|-------|--|--|-------|--|--|-------|--|---|-------|--|--|-------|--|---|-------|--|---|-------|--|-------|-------|--|
| | r | p | | r | p | | r | p | | r | p | | r | p | | r | p | | r | p | | r | p | | | | |
| Develop gerontological nursing course | 0.194 | 0.002 | | 0.264 | 0.000 | | 0.201 | 0.002 | | 0.191 | 0.003 | | 0.183 | 0.004 | | 0.268 | 0.000 | | 0.261 | 0.000 | | 0.268 | 0.000 | | 0.261 | 0.000 | |
| Leadership in gerontology | 0.193 | 0.002 | | 0.254 | 0.000 | | 0.157 | 0.012 | | 0.160 | 0.012 | | 0.093 | 0.149 | | 0.270 | 0.000 | | 0.229 | 0.000 | | 0.270 | 0.000 | | 0.229 | 0.000 | |
| Develop gerontological nursing clinical placement | 0.179 | 0.005 | | 0.259 | 0.000 | | 0.151 | 0.019 | | 0.182 | 0.004 | | 0.153 | 0.017 | | 0.216 | 0.001 | | 0.228 | 0.000 | | 0.216 | 0.001 | | 0.228 | 0.000 | |
| Address students' concerns | 0.117 | 0.006 | | 0.220 | 0.001 | | 0.147 | 0.022 | | 0.190 | 0.003 | | 0.126 | 0.050 | | 0.263 | 0.000 | | 0.225 | 0.000 | | 0.263 | 0.000 | | 0.225 | 0.000 | |
| Promote gerontological nursing career | 0.188 | 0.003 | | 0.268 | 0.000 | | 0.149 | 0.020 | | 0.181 | 0.005 | | 0.101 | 0.117 | | 0.230 | 0.000 | | 0.225 | 0.000 | | 0.230 | 0.000 | | 0.225 | 0.000 | |
| Knowledge & interest in gerontology | 0.091 | 0.956 | | 0.167 | 0.009 | | 0.060 | 0.350 | | 0.128 | 0.046 | | 0.029 | 0.654 | | 0.232 | 0.000 | | 0.143 | 0.025 | | 0.232 | 0.000 | | 0.143 | 0.025 | |
| Total GeNTS | 0.191 | 0.003 | | 0.270 | 0.000 | | 0.162 | 0.012 | | 0.192 | 0.003 | | 0.124 | 0.054 | | 0.282 | 0.000 | | 0.246 | 0.000 | | 0.282 | 0.000 | | 0.246 | 0.000 | |

teachers with credibility in gerontological nursing practice and theory, and by sharing their previous positive experiences in older people nursing. Furthermore, to promote students interest in older people nursing, teachers who administer gerontological nursing can demonstrate their leadership skills in gerontology by acting as advocates for the older people (Burbank et al., 2006; Koskinen et al., 2012). Akhtar-Danesh et al. (2013) viewpoints about professionalism and leadership among nurse teachers as humanists, portrayers, facilitators, and regulators could be recommended for gerontological nurse teachers to improve their leadership skill in gerontology. The humanists' aspect of being a professional nurse teacher refers showing dignity and respect (de Swardt et al., 2017; Ibrahim and Qalawa, 2015; Nouri et al., 2013) as well as protecting venerable peoples' privacy and protection against harm. Being a portrayer means the image and appearance that professionals such as gerontological nurse teachers demonstrate to the outside world and how one expresses themselves (Akhtar-Danesh et al., 2013). Gerontological nurse teachers as professionals therefore are supposed to act as facilitators to develop standards, policies, beliefs and values of their organizations to promote students' interest in older people nursing (Adams, 2013). Also as regulators, gerontological nurse teachers have a duty to ensure that standards and values governing gerontological nursing practice are echoed to their students (Akhtar-Danesh et al., 2013; Nouri et al., 2013).

Developing gerontological nursing practical training as observed in this study and previous studies is significant to increasing student willingness in older people nursing (Duggan et al., 2013; Kydd et al., 2014). As indicated by previous studies, providing support for nursing students and their mentors need to be enhanced to improve students' experiences during gerontological nursing clinical placement, thereby facilitating students' willingness in older people nursing (Ben et al., 2015; Carlson and Idvall, 2015; Duggan et al., 2013; King et al., 2013; Kydd et al., 2014). More so, nursing faculty and other stakeholders in gerontological nursing clinical settings could collaborate to improve upon the pedagogical and clinical placement atmosphere to enhance students' interest in older people nursing (Carlson and Idvall, 2015; Duggan et al., 2013; King et al., 2013; Kydd et al., 2014). For instance, Lea et al. (2015) noted that supportive placement integrated with debriefing and critical reflection, enhanced students' knowledge, understanding and attitudes around aged care and dementia. Also high levels of mentor support increased students' autonomy and students felt welcomed and supported (Lea et al., 2015). Likewise, Abbey et al. (2006), advocated for having Registered Nurses to supervise and act as role models for nursing students in pursuit of enhancing students' interest in older people nursing.

Furthermore, as revealed in this study and by previous researchers, addressing students' possible concerns about working with older people could minimize students' misconceptions sounding gerontological nursing, and potentially enhance their willingness in older people nursing (King et al., 2013; Koskinen et al., 2012; Kydd et al., 2014; Stevens, 2011). Particularly, gerontological nurse teachers must make conscious effort in promoting gerontological nursing careers by emphasizes the possibilities for job satisfaction in gerontological nursing careers (Duggan et al., 2013; Henderson et al., 2008; King et al., 2013; Koskinen et al., 2012; Kydd et al., 2014; Stevens, 2011). Also, consistent with previous studies, the results further indicate that, helping students identify the potentials for career advancement in gerontological nursing has significant influence on nursing students' willingness in older people nursing (Ben et al., 2015; King et al., 2013; Kydd et al., 2014; and Stevens, 2011). For instance, Haron et al. (2013), noted that the introduction of advanced studies in Clinical Nurse Specialist in Older People Nursing in Israel, lead to an increase in student interest in gerontological nursing career. Finally, the current research is consistent with other studies that point to the need for gerontological nurse teachers to promote the image of gerontological nursing by emphasizing on the potentials in gerontology careers and the possibility for career advancement (Ibrahim and Qalawa, 2015; King et al., 2013; de Swardt

et al., 2017).

6.2. Strengths and limitations

The result for Cronbach's Alpha for the whole questionnaire was 0.94 and ranged from 0.76 to 0.97 in the various constructs (Table 2). These values indicate a high level of internal consistency among the items (Gerrish and Lacey, 2013). The low response rate, however, limits the generalization of the results as those students who did not complete the questionnaire might have had a different perspective. This could have improved if the researcher had approached the participants in person and then administer the questionnaire for the participant to self-complete (Gerrish and Lacey, 2013). Additionally, it needs to be mentioned that we do not know whether the educators who created courses are the same ones who delivered content. Therefore asking to student to assess the ability of their teachers' base on a course they have delivered without knowing who has designed the course could be unfair. While students' assessment of their teachers' abilities is significant tool for quality control, it remains controversial in having competent educators and graduates. Also, the validity of students' assessment as means of measuring teaching effectiveness is questionable due to the different interpretation the participants might have about the questionnaire. Therefore having teachers self-assess their abilities to promote students' interest in older people nursing could be a fair measure.

6.3. Conclusion and recommendations

Overall, there was a statistically significant moderate positive association between students' perception of their gerontological nurse teachers' abilities and students' willingness in older people nursing. The students' perception about their teachers' abilities to develop gerontological nursing course was most influential on students' willingness in older people nursing, however this was rated the lowest mean score. In view of these results, we sight with previous studies that have pointed to the need to have teachers with expertise and enthusiasm in gerontological nursing to administer gerontological nursing course, in order to promote and sustain students' interest in older people nursing (Garbrah et al., 2017; Koskinen et al., 2012). Also, we agree with Baumbusch et al. (2012) in questioning the capability and readiness of nursing faculty to initiate the necessary changes needed to build and sustain a reputable gerontological nursing profile. We therefore suggest to leaders in nursing faculty to ensure adequate personnel with expertise in gerontological nursing to advocate for resources to establish a reputable gerontological nursing profile in nursing curriculum and to sustain a positive attitude towards older people nursing among students and faculty. We further call for leaders in nursing faculty to develop an age-friendly curriculum to prepare nursing students who are enthusiastic and competent to coordinate nursing care of older people. Nursing faculties could also collaborate with stakeholders of gerontological nursing clinical settings to improve upon the mentorship and students experiences.

A qualitative study is needed to understand the reasons behind the students' ratings of their gerontological nurse teachers' abilities. Also, exploring the impact of those ratings and perceptions have on students' professional growth could be significant to promoting effective teaching and learning. Furthermore, teachers self-rating their abilities to promote students' willingness in older people nursing could be a fair measure in future studies.

Author contributions

Study design - WG, PK, TV
 Data acquisition, analysis, and interpretation - WG
 Involved in drafting the manuscript - WG
 Revising the manuscript - WG, PK, TV
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References

- Abbey, J., Abbey, B., Bridges, P., Elder, R., Lemcke, P., Liddle, J., Thornton, R., 2006. Clinical placements in residential aged care facilities: the impact on nursing students' perception of aged care and the effect on career plans. *Aust. J. Adv. Nurs.* 23 (4), 14–19.
- Adams, K., 2013. Practice teaching: professional identity and role recognition. *Commun. Pract.* 86 (10), 20–23.
- Akhtar-Danesh, N., Baumann, A., Kolotylo, C., Lawlor, Y., Tompkins, C., Lee, R., 2013. Perceptions of professionalism among nursing faculty and nursing students. *West. J. Nurs. Res.* 35 (2), 248–271.
- Algoos, M., Peters, K., Ramjan, L., East, L., 2016. Exploring undergraduate nursing students' perceptions of working in aged care settings: a review of the literature. *Nurse Educ. Today* 36, 275–280.
- Baumbusch, J., Dahlke, S., Phinney, A., 2012. Nursing students' knowledge and beliefs about care of older adults in a shifting context of nursing education. *J. Adv. Nurs.* 68 (11), 2550–2558. <https://doi.org/10.1111/j.1365-2648.2012.05958>.
- Ben, N.M., Danino, S., Freundlich, N., Barda, A., Mor, Y.R., 2015. Intention of nursing students to work in geriatrics. *Res. Gerontol. Nurs.* 8 (3), 140–147.
- Burbank, P.M., Dowling-Castronovo, A., Crowther, M.R., Capezuti, E.A., 2006. Improving knowledge and attitudes toward older adults through innovative educational strategies. *Journal of Professional Nursing* 22, 91–97.
- Bono-Neri, F., 2019. Pedagogical nursing practice: redefining nursing practice for the academic nurse educator. *Nurse Educ. Pract.* 37, 105–108.
- Carlson, E., Idvall, E., 2015. Who wants to work with older people? Swedish student nurses' willingness to work in elderly care—a questionnaire study. *Nurse Educ. Today* 35 (7), 849–853.
- Chilemba, E.B., Bruce, J.C., 2015. Teaching styles used in Malawian BSN programmes: a survey of nurse educator preferences. *Nurse Education Today* 35, 55–60.
- Del Prato, D., 2013. Students' voices: the lived experience of faculty incivility as a barrier to professional formation in associate degree nursing education. *Nurse Educ. Today* 33, 286–290.
- Duggan, S., Mitchell, E.A., Moore, K.D., 2013. 'With a bit of tweaking... we could be great'. An exploratory study of the perceptions of students on working with older people in a preregistration BSc (Hons) nursing course. *Int. J. Older People Nursing* 8 (3), 207–215.
- Felicilda-Reynaldo, R.F.D., Utley, R., 2015. Reflections of evidence-based practice in nurse educators' teaching philosophy statements. *Nurs. Educ. Perspect.* 36, 2. <https://doi.org/10.5480/13-1176>.
- Finnish Advisory Board on Research Integrity, 2012. Responsible conduct of research and procedures for handling allegations of misconduct in Finland. http://www.tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf, Accessed date: 10 June 2018.
- Garbrah, W., Välimäki, T., Palovaara, M., Kankkunen, P., 2017. Nursing curriculums may hinder a career in gerontological nursing: an integrative review. *Int. J. Older People Nursing* 0, 1–11. <https://doi.org/10.1111/opn.12152>.
- Garbrah, W., Kankkunen, P., Välimäki, T., 2020. Development and validation of gerontological nurse teacher scale. *Nurse Educ. Pract.* 44, 102763 (accepted for production).
- General Data Protection Regulation, 2018. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC. <http://data.europa.eu/eli/reg/2016/679/oj>.
- Gerrish, K., Lacey, A., 2013. *The Research Process in Nursing*. John Wiley & Sons, Incorporated ProQuest Ebook Central. <http://ebookcentral.proquest.com/lib/jypoly-ebooks/detail.action?docID=1166315>.
- Gustafsson, M., Engström, A.K., Ohlsson, U., Sundler, A.J., Bisholt, B., 2015. Nurse teacher models in clinical education from the perspective of student nurses - a mixed method study. *Nurse Educ. Today* 35, 1289–1294.
- Haron, Y., Levy, S., Albagli, M., Rotstein, R., Riba, S., 2013. Why do nursing students not want to work in geriatric care? A national questionnaire survey. *Int. J. Nurs. Stud.* 50 (11), 1558–1565.
- Henderson, J., Xiao, L., Sieglhoff, L., Kelton, M., Paterson, J., 2008. Older people have lived their lives: first year nursing students' attitudes towards older people. *J. Austr. Nurs. Profess.* 30 (1), 32–45.
- Henry, B.W., Ozier, A.D., Johnson, A., 2011. Empathetic responses and attitudes about older adults: how experience with the aging game measures up. *Educ. Gerontol.* 37, 924–941.
- Hwang, H.L., Wang, H.H., Tu, C.T., Chen, S., Chang, S.H., 2014. Reciprocity of service learning among students and paired residents in long-term care facilities. *Nurse Educ. Today* 34 (5), 854–859.
- Ibrahim, S.A.E.-A., Qalawa, S.A., 2015. Factors affecting nursing students' incivility: as perceived by students and faculty staff. *Nurse Educ. Today* 36, 118–123.
- Jackson, C., 2009. A review of nurse educator career pathways; a European perspective. *J. Res. Nurs.* 14 (2).
- Kim, M.J., Mallory, C., 2017. *Statistics for Evidence-Based Practice in Nursing*, Second edition. Jones & Bartlett Learning, Burlington, MA.
- King, B.J., Roberts, T.J., Bowers, B.J., 2013. Nursing student attitudes toward and preferences for working with older adults. *Gerontol. Geriatr. Educ.* 34 (3), 272–291.
- Klunklin, A., Sawasdisingha, P., Viseskul, N., Funashima, N., Kameoka, T., Nomoto, Y., Nakayama, T., 2011. Role model behaviors of nursing faculty members in Thailand.

- Nurs. Health Sci. 13, 84–87.
- Koskinen, S., 2016. Nursing students and older people nursing: towards a future career. (Doctoral dissertation). (Retrieved from ResearchGate. file:///C:/Users/p0089376/Downloads/AnnalesD1223Koskinen%20(2).pdf Accessed on 21 September 2019).
- Koskinen, S., Hupli, M., Katajisto, J., Salminen, L., 2012. Graduating Finnish nurse students' interest in gerontological nursing—a survey study. *Nurse Educ. Today* 32 (4), 356–360.
- Kydd, A., Touhy, T., Newman, D., Fagerberg, I., Engstrom, G., 2014. Attitudes towards caring for older people in Scotland, Sweden and the United States. *Nurs. Older People* 26 (2), 33–40.
- Lea, E., Marlow, A., Bramble, M., Andrews, S., Eccleston, C., Mcinerney, F., Robinson, A., 2015. Improving student nurses' aged care understandings through a supported placement. *Int. Nurs. Rev.* 62, 28–35.
- Neville, C., Dickie, R., Goetz, S., 2014. What's stopping a career in gerontological nursing?: literature review. *J. Gerontol. Nurs.* 40 (1), 18–27.
- Nguyen, D.N., Zierler, B., Nguyen, H.Q., 2011. A survey of nursing faculty needs for training in use of new technologies for education and practice. *J. Nurs. Educ.* 50, 4. <https://doi.org/10.3928/01484834-20101130-06>.
- Nouri, J.M., Ebadi, A., Alhani, F., Rejeh, N., Ahmadizadeh, M.J., 2013. Qualitative study of humanization-based nursing education focused on role modeling by instructors. *Nurs. Health Sci.* 15, 137–143.
- Oprescu, F., McAllister, M., Duncan, D., Jones, C., 2017. Professional development needs of nurse educators. An Australian case study. *Nurse Educ. Pract.* 27 (2017), 165–168.
- Pennbrant, S., 2016. Determination of the concepts “profession” and “role” in relation to nurse educator. *J. Prof. Nurs.* 32 (6), 430–438. <https://doi.org/10.1016/j.profnurs.2016.02.003>.
- Petit Dit Dariel, O., Wharrad, H., Windle, R., 2013. Exploring the underlying factors influencing e-learning adoption in nurse education. *J. Adv. Nurs.* 69 (6), 1289–1300.
- Reitmaier, A., Davies, S., Smith, L., Mangan-Danckwart, D., Hongerholt, K., Klinkner, J., 2014. Discovering intergenerativity: an evaluation of learning partnerships between student nurses and older adults. *Int. J. Older People Nursing.* <https://doi.org/10.1111/opn.12061>.
- Salminen, L., Stolt, M., Koskinen, S., Katajisto, J., Leino-Kilpi, H., 2013. The competence and the cooperation of nurse educators. *Nurse Educ. Today* 33, 1376–1381.
- Stevens, J.A., 2011. Student nurses' career preferences for working with older people: a replicated longitudinal survey. *Int. J. Nurs. Stud.* 48 (8), 944–951.
- Swanlund, S., Kujath, A., 2012. Attitudes of baccalaureate nursing students toward older adults: a pilot study. *Nurs. Educ. Perspect.* 33 (3), 181–183.
- de Swardt, H.C.R., van Rensburg, G.H., Oosthuizen, M.J., 2017. Supporting students in professional socialisation: guidelines for professional nurses and educators. *Int. J. Afr. Nurs. Sci.* 6, 1–7.
- Ume-Nwagbo, P.N., 2012. Implications of nursing faculties' cultural competence. *J. Nurs. Educ.* 51, 5.
- WHO, 2014. Ageing and Life Course. Ageing and life-course. Facts about ageing. <http://www.who.int/ageing/about/facts/en/>.
- WMA, 2018. Declaration of Helsinki – ethical principles for medical research involving human subjects. <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>.
- Zisberg, A., Topaz, M., Band-Wintershtein, T., 2015. Cultural-and educational-level differences in students' knowledge, attitudes, and preferences for working with older adults: an Israeli perspective. *J. Transcult. Nurs.* 26 (2), 193–201.
- Zlatanovic, T., Havnes, A., Mausestagen, S., 2016. A research review of nurse teachers' competencies. *Vocat. Learn.* <https://doi.org/10.1007/s12186-016-9169-0>.