



Undergraduate Nursing Students' Commitment to the Nursing Major During the COVID-19 Pandemic

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INTRODUCTION

Aim: This study aimed to determine if the COVID-19 Pandemic contributed to nursing students' intent to change majors and to further explore factors associated with attrition during the pandemic.

BACKGROUND & LITERATURE REVIEW

De Leon (2018) performed a meta-analysis on reasons for undergraduate attrition. DeLeon (2018) provides the following categories: micro, meso, or macro system elements. Micro system elements include involuntary and voluntary personal factors. These include unrealistic expectations about demands, personal - family - social - academic conflicts, ineffective coping/disengagement defense mechanisms, financial difficulties, travel, relocation difficulties, and nursing as a wrong career choice. The meso system includes institutional and program factors such as: course content, classroom management issues, faculty and staff issues, and clinical placement issues. The macro system refers to the profession of nursing and societal influences (DeLeon, 2018). All levels of attrition categories as identified by De Leon have been impacted by the pandemic.

The COVID -19 pandemic brought a sudden and necessary change to course delivery in nursing schools. Lecture courses changed from face-to-face didactic sessions to online lessons. The type of online course delivery varied between the nursing schools included in this study. Delivery methods included pre-recorded lectures, live lectures via Zoom, and providing the materials e.g. PowerPoint® to the student without any further direction from instructors. Many health care facilities did not permit students into clinic settings for their hands-on experience due to the potential increased risk of COVID-19 exposure that students may inherently provide. Resultantly, students completed alternative course work such as simulated patient experiences in a face-to-face setting with their nursing instructor and/or completed virtual patient simulations. The majority of students in this study (98.7%) reported that their coursework transitioned to an online format due to the pandemic.

PROJECT DESIGN

A cross-sectional design was used to examine the research questions.

Instruments: An original online survey using Qualtrics® software was used. There was a total of 51 questions, including demographic data. The survey was inclusive of the Four Question Patient Health Questionnaire for anxiety and depression (PHQ-4) and the ten question Perceived Stress Scale (PSS-10), both validated and reliable tools. A five-point Likert scale was used on applicable questions with 1 indicating "strongly agree" through 5 representing "strongly disagree". There were two open-ended questions assessing personal and academic support during the pandemic. Students were also provided an area to add any additional comments.

Data Collection: After obtaining IRB approval from the researchers' university, students were sent an invitation email with a link to take an anonymous online survey. Participants were recruited via email starting on April 27, 2020. The purpose of the study was communicated to students in the body of the email. Students were provided an informed consent document as well as a link to the Qualtrics® survey. Students were informed that participation was voluntary and that they could withdraw at any point without penalty. Incentivization was a chance to win a \$25 Amazon gift card. At the end of the survey, students could elect to click a different link to put their name in a drawing for a chance to win, thus preserving anonymity. Approximately two weeks after the initial primary contact, a follow-up invitation was emailed to all undergraduate nursing students at the researchers' university. Data collection stopped on June 24, 2020. There was no face-to-face contact occurred in order to participate in this study.

Data Analysis

Data was obtained via an online survey. A mixed methods approach was used, gathering both quantitative and qualitative data. IBM SPSS® (Version 28) was utilized to analyze the quantitative findings for this submission. Descriptive statistics were used to describe the sample. Cross tab comparisons, means, and standard deviations were calculated to answer the study questions. Pearson's product-moment correlation coefficient was used to determine correlations between interval level variables.

THEORETICAL FRAMEWORK

The theoretical framework for this project aligns with Tinto's Theory of Student Departure. According to Tinto, "students depart schools prior to achieving their degree due to the nature and quality of interactions with the university" (Long, 2012). Tinto's theory identifies students whose interpersonal factors conflict with the university's choice to leave the university. The conflict often lies in academic problems, a low level of commitment to the university, and a failure to integrate socially and intellectually with the culture of the university (Long, 2012). The COVID-19 pandemic introduced a plethora of factors that may have introduced a conflict between individual students' values and the university as identified above.

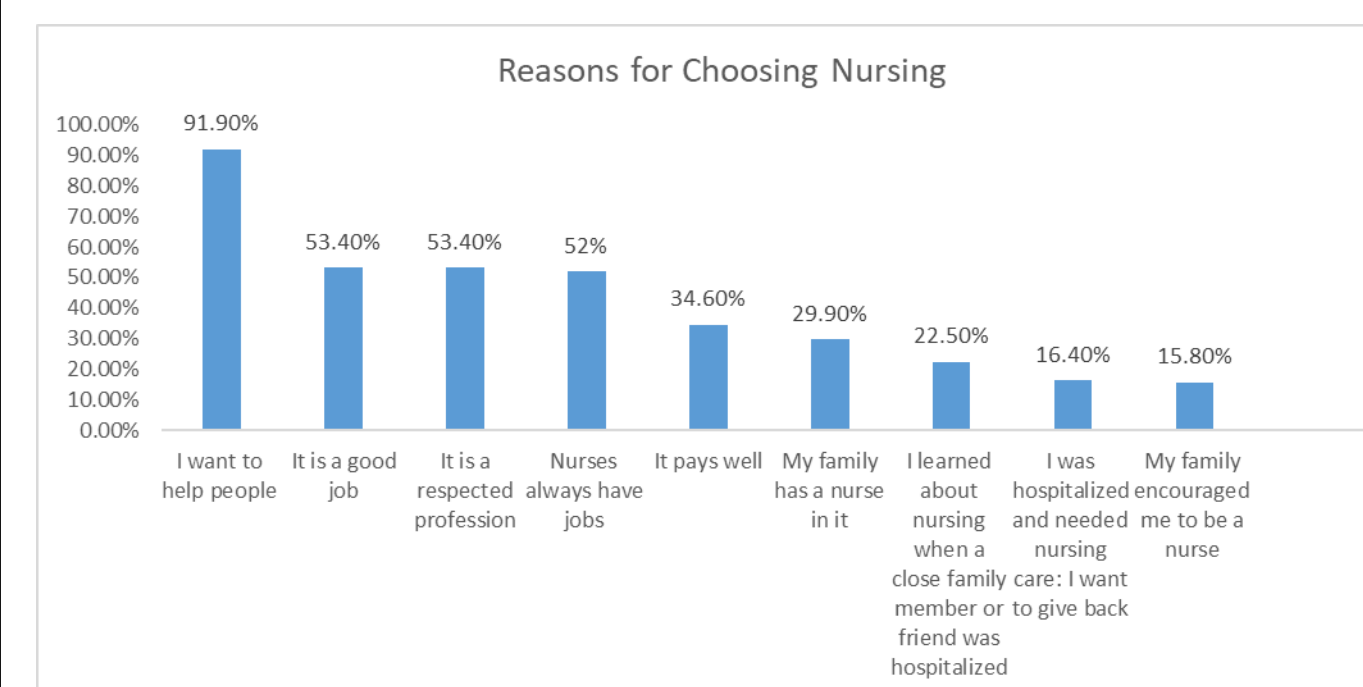
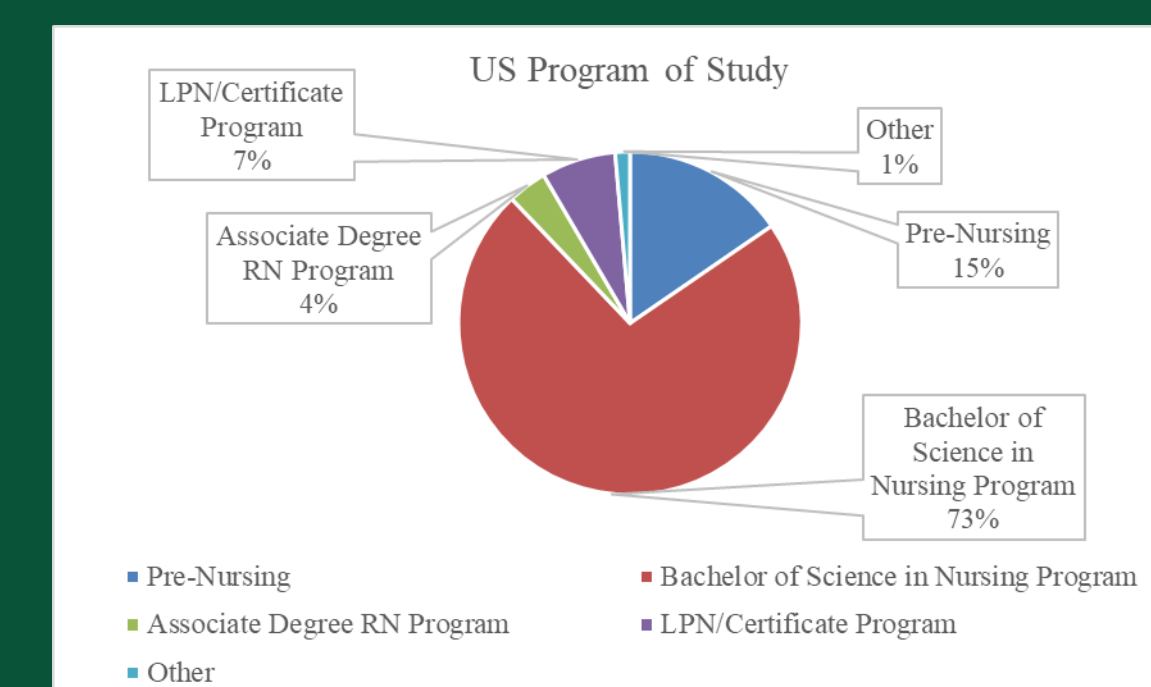
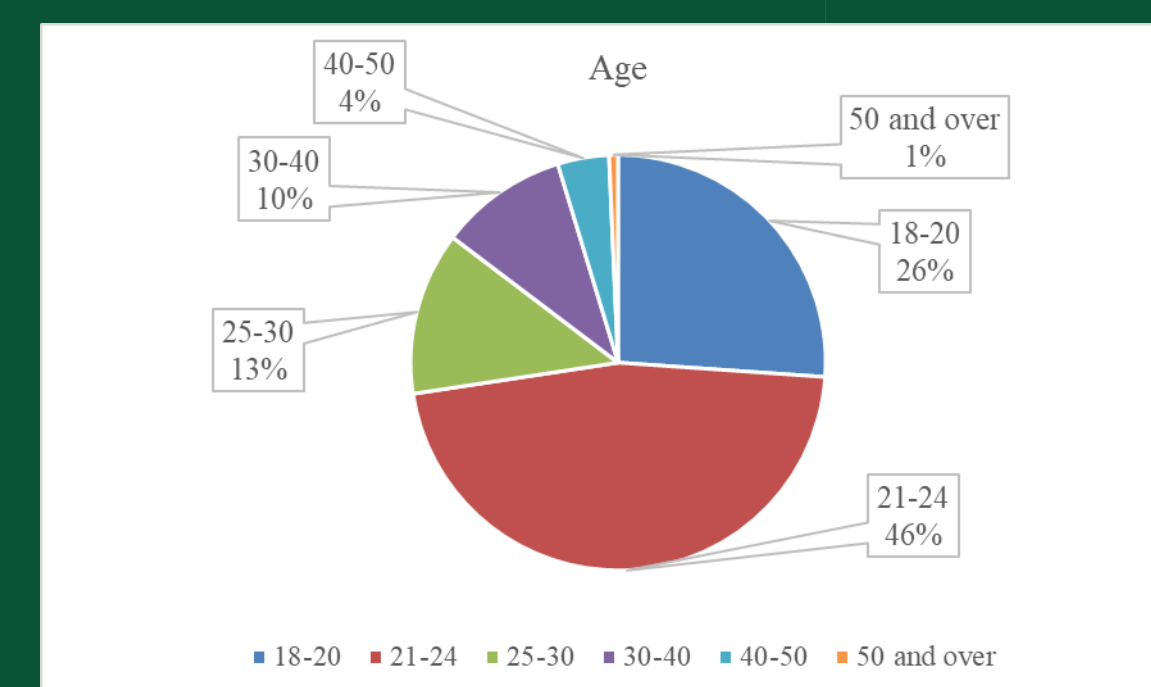
RESEARCH QUESTIONS

1. What was the impact of the COVID-19 Pandemic on nursing students' commitment to the nursing major?
2. Which factors were correlated with continued commitment to the nursing major?

PARTICIPANTS

Due to the shared phenomenon of the pandemic, researchers sought to capture data from as many students as possible, both in the U.S. and internationally. The survey was disseminated by communicating with other nursing faculty via previous connections and professional networking groups on social media. Invitations to participate were emailed to students who had declared nursing or pre-nursing as their major. The informed consent identified that students needed to be at least 18 years of age to participate. A total of 302 undergraduate nursing students participated. There were 214 students from several U.S. schools of nursing and 88 students from one Italian nursing school. Eight different states were represented as a residence for U.S. students (LA, MI, OK, MN, TX, WI, IL, and CA). All Italian students attended the same nursing school in Italy and did not specify which region of Italy they resided.

The majority of U.S. nursing students had GPAs ranging from 3.0- 4.0 on a 4.0 scale (89%). As the Italian grading system differs, Italian students were asked about their marks. Scores ranging from 25-30 comprised 81.4% of Italian student scores. A score of 30 is the maximum score, while 18 is the minimum to pass a course.

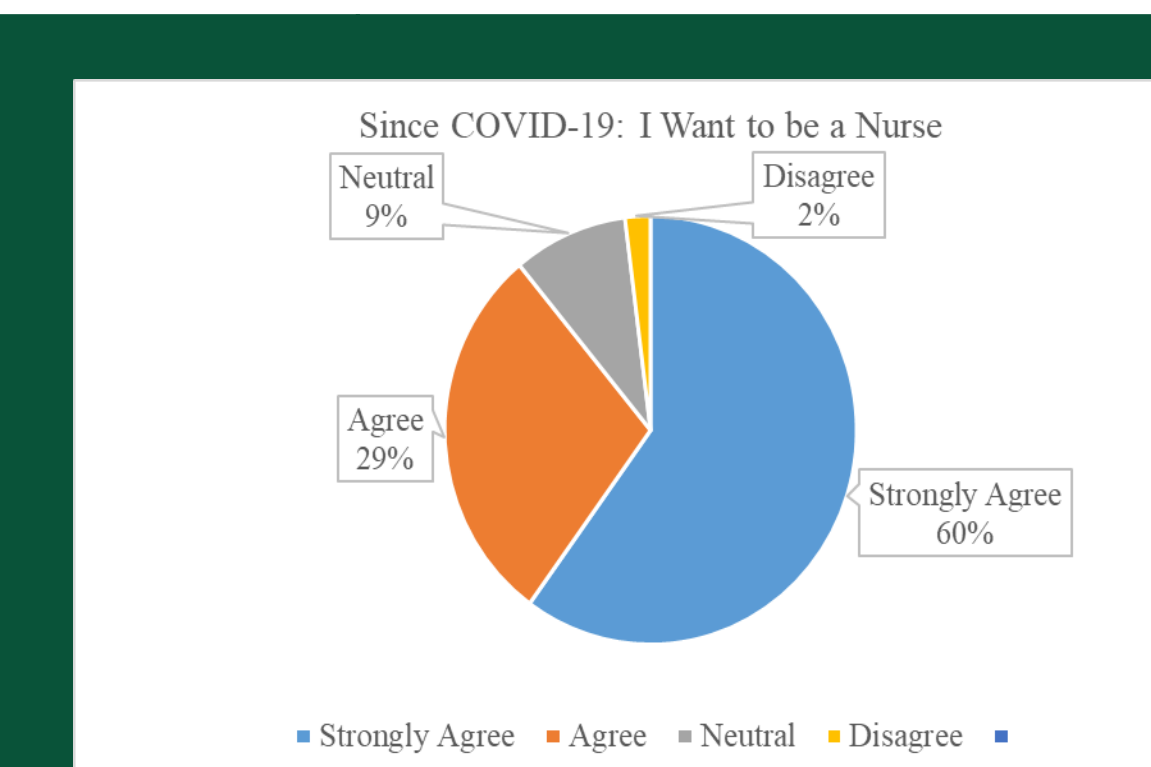
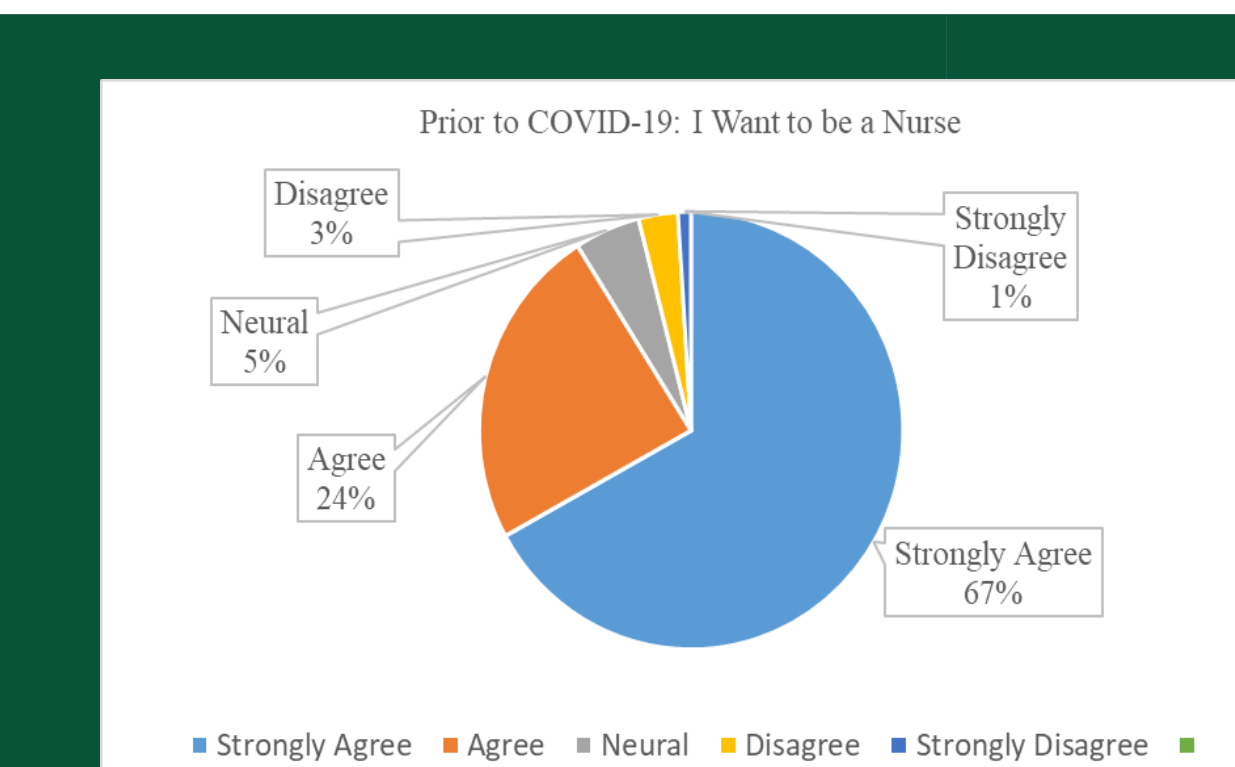
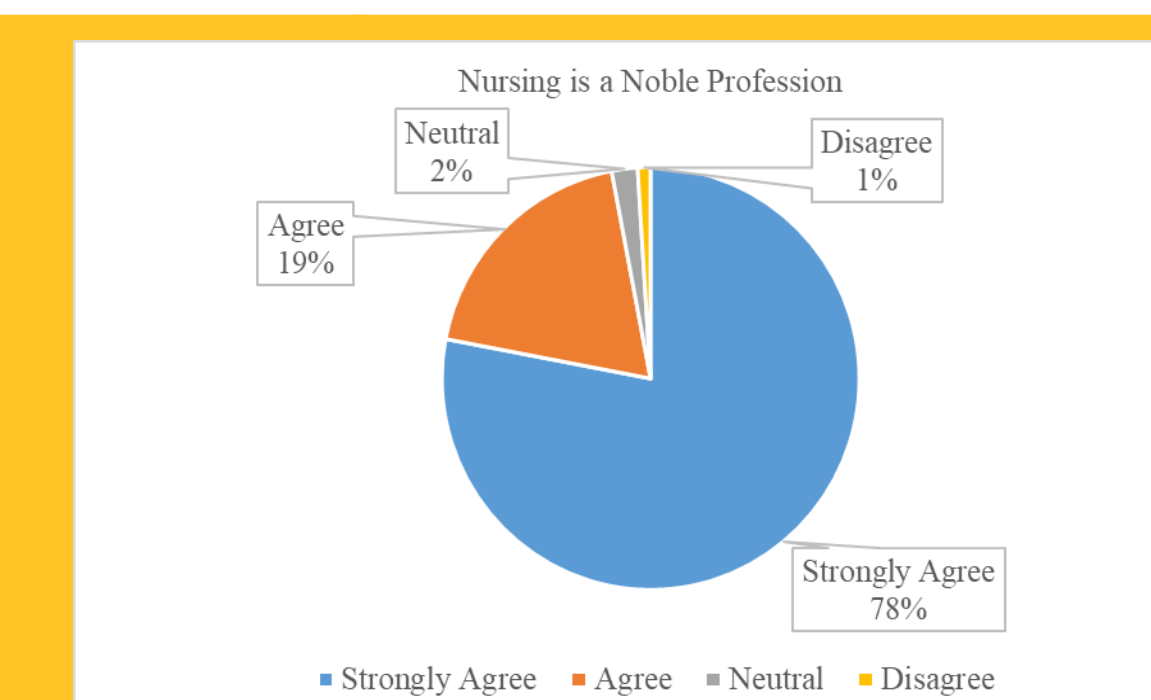
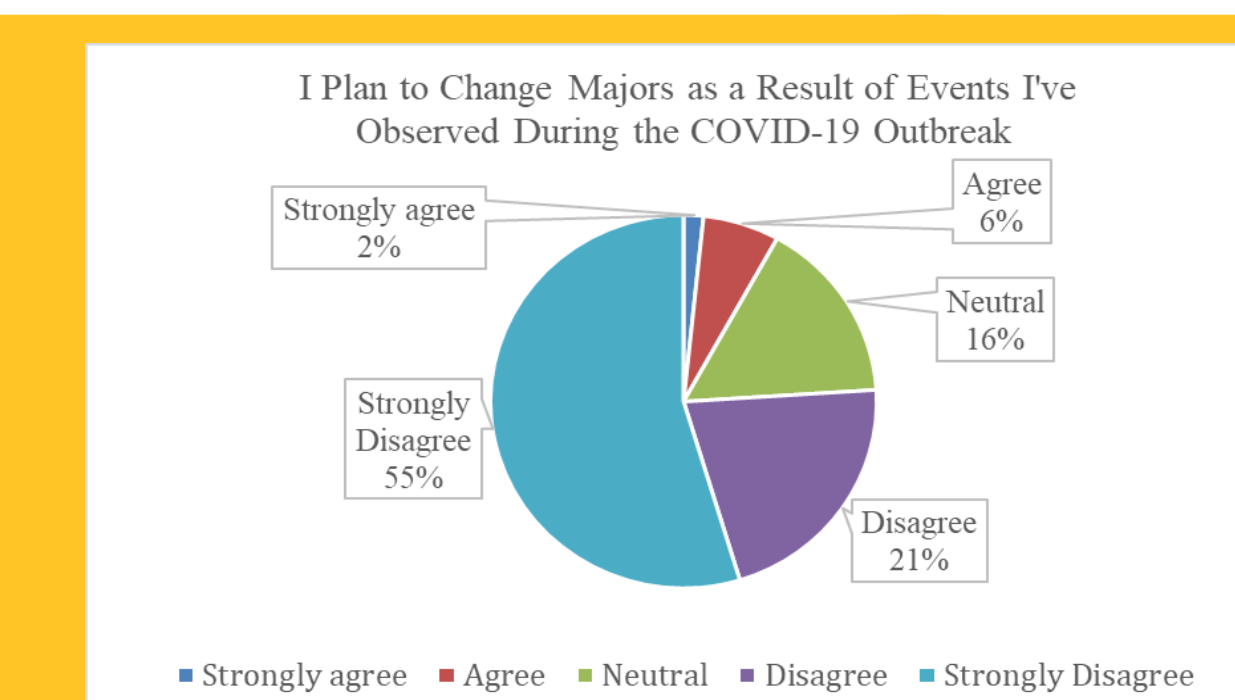


Survey Items with statistically significant correlation with:	Pearson Correlation	Sig. (2-tailed)	N
"I plan to change majors as a result of events I've observed during the COVID-19 outbreak?"	-.228	.000	296
Since the changes brought about by COVID-19 I have had more difficulty staying motivated to complete my course work and studying	-.236	.000	291
My current GPA is:	-.243	.032	78
Nursing is a noble profession	-.131	.024	296

	US	Italian	Total
N	214	88	302
Gender	F93.9%/M6%	F84.1%/M15.4%	Aggregate total F92%/M8%

RESULTS

A total of 302 undergraduate nursing students participated in the survey. Even though 86.6% of students either agreed or strongly agreed with the statement "nurses' lives are in danger", data indicated that overall, this sample of nursing students still desire to be a nurse and intend to stay in the nursing major.



DISCUSSION & RECOMMENDATIONS

Research Question 1: What was the impact of the COVID-19 pandemic on student's commitments to the nursing major?

Prior to the pandemic, 93.6% of students either agreed or strongly agreed with the statement "I want to be a nurse". A paired t-test found that there was a statistically significant difference (p<.001) when comparing the statements "Prior to the COVID-19 impact, how would you rate the following statement: I want to be a nurse" (mean 1.39+0.38) and "Since the COVID-19 impact how would you rate the following statement: "I want to be a nurse" (mean 1.53+0.43). Although the desire was significantly decreased by the pandemic, 89.3% continue to agree or strongly agree with this statement. Data indicated that 76% of students either disagreed or strongly disagreed with the statement "I plan to change majors as a result of events I've observed during the COVID-19 outbreak" (mean 4.21+1.037).

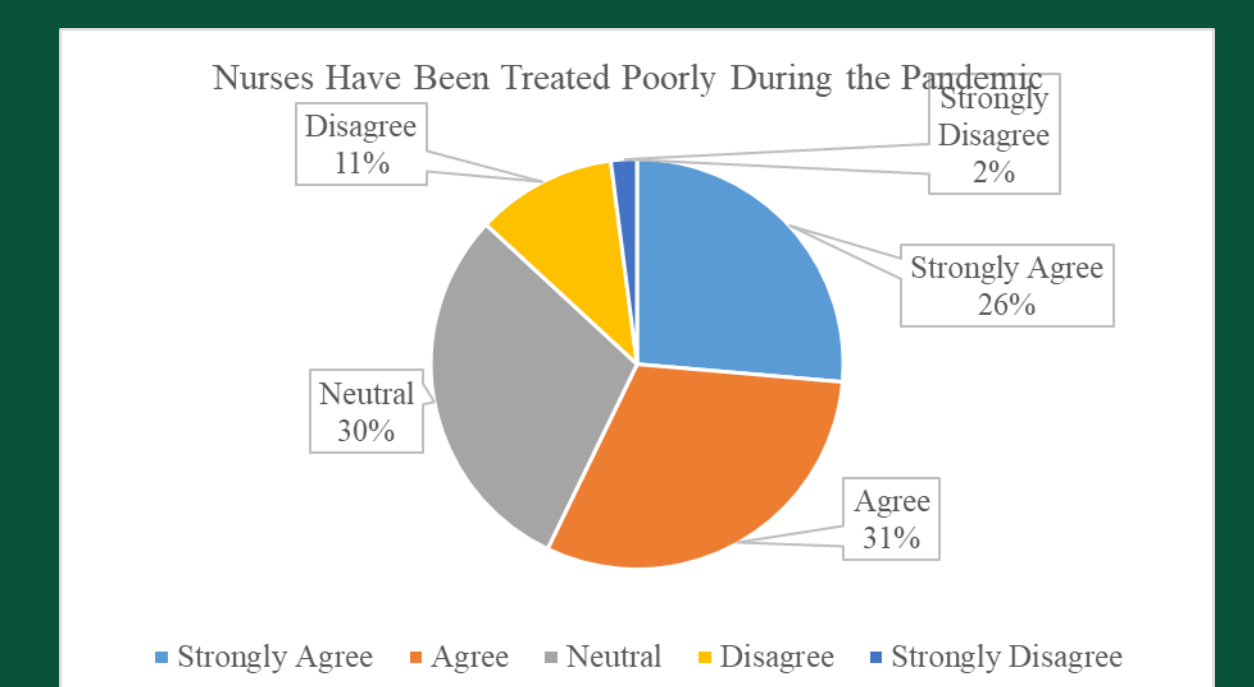
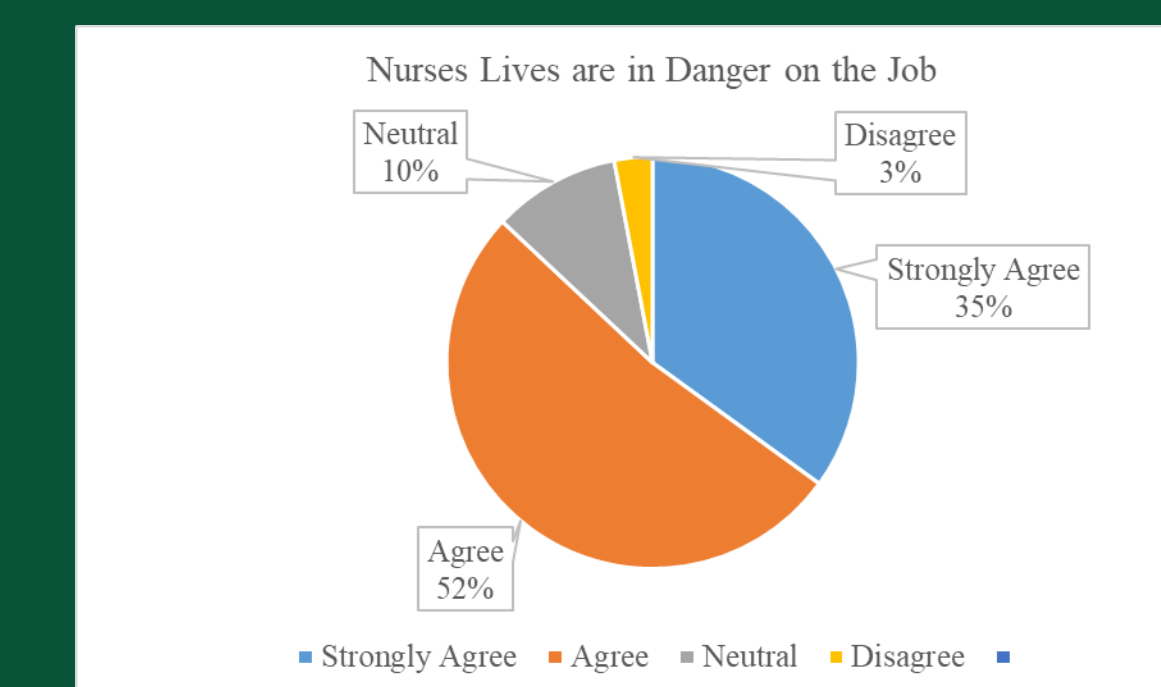
Research Question 2: Which factors were correlated with continued commitment to the nursing major?

Data was examined to identify potential factors associated with an ongoing commitment to a nursing major. A "select all" question asked students to identify reasons that they chose nursing as their major. A majority (91.7%) of students identified choosing nursing as their major "to help people". This is an intrinsic motivator, which has been identified with lower rates of attrition (ten Hoeve et al., 2017). Students overall agreed with the statement "nursing is a noble profession", with 97% either strongly agreeing or agreeing.

In this study, researchers investigated correlations with agreement with the statement "I plan to change majors". Weak positive correlations (sig 0.05 level: 2 tailed) were found between plans to change major and gender - with males being more likely to change majors (r=.120), the number of semesters with hands on care (r=.142) and reported improved diet and eating habits (r=.126). Weak negative correlations (sig 0.05 level: 2 tailed) were agreeing with nursing being a noble profession (r=-.131) and difficulty staying motivated (r=-.228). Weak negative correlations at the sig 0.01 level: 2 tailed, were needing the support of others (r=-.156) and GPA or marks (r=-.236 and -.243 respectively).

PHQ-4 and PSS-10 scores were obtained to examine student stress levels at the time of the study. The mean PHQ-4 score was 8.5, indicating that students were between the moderate and severe symptoms of anxiety and depression (Kroenke et al., 2009). The mean aggregate PSS-10 score was 19.6. A score of 20 indicates severe stress (Lee, 2012). A strong negative correlation was found between PHQ-4 (r= -0.58) and PSS-10 (r= -0.87) scores and a student's intention to change majors.

The following items were not found to have a significant relationship with the intent to change majors: living alone, time spent on social media, time spent on coursework, whether or not they felt they had received a good education since the COVID-19 occurrence and whether or not they felt less knowledgeable or prepared as a nurse because part of my clinical experience was online instead of face-to-face with patients. Other items not associated with an intent to change majors were: "nurses' lives are in danger" and "nurses have been treated poorly during the COVID-19 pandemic".



STRENGTH AND LIMITATIONS

The study focused on undergraduate nursing students. The percentage of students identifying as male is typically lower in this population, which is reflected in the results received. Additional limitations may have been the length of the study (51 questions). Because the survey was done near the beginning of the pandemic and not repeated, it is not known if the cumulative effects of the pandemic would make a difference in responses. Also, it is also not known how many students were lost to attrition, because the survey only inquires about intent. The survey questions included some previously identified tools as valid and reliable. However, other items have not been utilized previously. Students reported residing in several U.S. states as well as in Italy, with U.S. students outnumbering Italian students. There was likely some regional variation in COVID-19 restrictions e.g. mask use, quarantine guidelines, lockdown orders, etc. These different conditions may have impacted the results of those living in different geographic areas and with different governing bodies.

IMPLICATIONS FOR PRACTICE

The majority of nursing students in this study identified at least one altruistic reason for choosing the profession, which likely provided the motivation for continuance in their nursing program. Nursing faculty, preceptors, and staff nurses working with students are in a position to further foster this commitment. Identifying factors that are correlated with an increased risk of leaving the major allows educators to identify those students at a higher risk of attrition. In this case, higher rates of anxiety and depression were most strongly associated with the plan to change majors. Early support and appropriate intervention may improve the retention of at-risk students.

CONCLUSION

Nursing students experienced a decreased desire to be a nurse when comparing prior to and since pandemic timeframes. Despite this significant decrease, students overall still continued to express a desire to be a nurse. Mental health challenges were most strongly correlated with an intent to change majors.

REFERENCES



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