Assessment Of Procrastination Behavior Among Critical Care Nurses

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Abstract

Background: *Controlling procrastination among nurses is one of the key issues toward enhancing productivity, not only for nursing but also for the whole healthcare system. Nurses working in critical care units are highly vulnerable to procrastination than other groups due to the specific features of these units. Nurses could procrastinate their tasks intentionally, which is known as active procrastination, or unintentionally, which is called passive procrastination.* ***Aim:*** *This study aims to assess the prevalence of procrastination behavior among critical care nurses. Also, this study aims to identify forms of procrastination behavior exhibited by nurses at critical care units.* ***Method:*** *This is a descriptive study that was conducted at all critical units of Alexandria Main University Hospital. Data were collected from 360 nurses that were conveniently selected using two tools, namely the New Active Procrastination Scale (NAPS) and the Unintentional Procrastination Scale (UPS).* ***Results:*** *The mean score of nurses' active procrastination behavior is 65.1 ± 12.2 and 13.8 ± 4.7 for passive procrastination behavior. Also, 80.0% of nurses had moderate perceived level of active procrastination behavior whereas 45.3% of them had moderate perceived level of passive procrastination behavior.* ***Conclusion:*** *It is evident that the future of nursing productivity and quality of nursing care is at high risk with an expected decline rate since procrastination behavior is moderately visible among nurses, which necessitates urgent measures to be taken to buffer its negative effects on the nursing profession and patient care sensitive indicators. Furthermore, the current study revealed that nurses' procrastination behavior can take two forms: passive and active. Both forms are practiced moderately.* ***Recommendations:*** *Nurse managers should conduct continuous training programs to enhance time management skills among nurses. Regular identification of possible nurse procrastinators and then offering counseling is also a promising strategy toward eradicating this behavior at the workplace.*

Keywords: Procrastination, behavior, Critical care, Nurses, Active procrastination, passive procrastination

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Introduction

Procrastination is a widespread phenomenon in all fields, but its presence and spread in the medical field is very dangerous because it may affect the health and lives of patients (Babaie et al., 2022). Procrastination is the deliberate or inadvertent postponement of a task that one intends to do, even when one expects to suffer consequences (Onuegbu et al., 2020). According to Aziz et al. (2019), procrastination is a complex phenomenon with cognitive, affective, and behavioral components. It is not just a problem with time management. It is characterized by difficulties starting or finishing tasks, lack of motivation or self-regulation, poor time management, avoidance of negative feelings or feedback, and justification of one's behaviors (Martín-Antón et al., 2023; Ferrari et al., 2018). Procrastination can lead to missed deadlines, lower-quality work, increased stress, and decreased job satisfaction, among other negative effects on one's performance at work (Mosquera et al., 2022).

Procrastination behavior is reported in a wide scale among nurses. For example, Mohamed et al., (2020) found that 37.2% of nurses working at pediatric hospital reported procrastination. Also, 19.6% of nurses working at Psychiatric hospital demonstrate procrastination. In addition, a study found a high level of academic procrastination in 29.6% of the Egyptian students and a low level in 33.3% of them (Basirimoghadam, et al.,2020). Procrastination is common among medical students, with a larger frequency among females than males, about 95.5% procrastinate, while the remaining 4.5% do not (Ali et al., 2022). According to Guo et al. (2019), junior college nursing students exhibit a higher level of academic procrastination.

According to Choi and Moran (2009), there are two types of procrastination that influence nurses: active and passive procrastination. Active procrastination is characterized by purposefully delaying the start and finish of a major assignment while having a lot of faith in one's ability to fulfill deadlines and produce a satisfying result (Sanecka et al., 2022). Active procrastinators can accomplish task before deadline. Additionally, they consciously choose to put off tasks (Choi & Moran, 2009).

According to Aziz et al. (2019), active procrastination is the deliberate cognitive choice to put off or put off anything. Active procrastinators nurses characterized by having the ability to act promptly and positively on their judgments. They decide to put off taking action in focus their attention on other task, maybe as important (Wessel et al., 2019). Active procrastinators nurses keep themselves free from a fixed time schedule and rigid time structure by shifting their attention from routine schedules to effective accomplishment of the goal. (Tudose et al., 2021). Active procrastinators are more resilient to stress and take more effective steps to manage work related pressures that in turn leads to complete the required tasks (Aziz et al., 2019; Di Nocera et al., 2023).

According to Choi and Moran (2009) active procrastination articulated around four dimensions namely; intentional decision to procrastinate, preference for deadline pressure, ability to meet deadlines, capacity to produce satisfactory outcomes. Choi and Moran (2009) proposed that active procrastination involves an intentional decision to delay the beginning or completion of a task. Choi and Moran proposed that those who actively procrastinate use this tactic to put other obligations ahead of their work by delaying the start or finish of assignments. The capacity to give some jobs more importance than others indicates that one is capable of making choices and coming up with plans of action to reach objectives (Onuegbu et al., 2020). Thus, intentional decision to procrastinate, in the context of nursing may takes such forms, when nurse work with patient have life-threatening or critical condition who are entirely dependent on and need to receive more professional care. This dependency causes nurses to spend more time caring for the patient. Subsequently, nurse take decision to prioritize specific tasks (Babaie et al.,2022).

Preference time pressure may have different outcomes in different individuals depending on procrastination types the individual practices. Chu and Choi (2005) proposed that active

procrastinator tend to like working under pressure. Thus, preference time pressure, in the context of nursing may takes such form, the nurse intentionally postponed the task will be motivated to complete it and will work efficiently under time pressure e.g. recording a detailed nursing report (Babaie et al.,2022).

According to Chu and Choi (2009), the capacity to finish a task by the anticipated deadline is one of the key characteristics that sets active procrastination apart. Ability to meet deadlines, in the context of nursing may takes such form, the nurse completes all required tasks before the end of the shift e.g. recording shift report, give full care for patient (Babaie et al.,2022).

According to Choi and Moran (2009), active procrastinators possess the capacity to employ a purposeful delay strategy and exhibit great motivation to complete things ahead of schedule, which enables them to create quality work within time constraints. active procrastinators also possess a certain level of stability and confidence. Active procrastination does not add to behavioral delay, as shown by Wesel and Hood (2019).

Active procrastinator nurses will actively participate in task planning and organization. Conversely, if the task is of low priority, nurses tend to delay the task longer. Accordingly, active procrastinators nurse makes deliberate decisions to procrastinate. Moreover, they choose whether to procrastinate according to the significant and urgency of the task (Babaie et al., 2022).

Passive procrastinators do not intend to procrastinate, they often end up doing so due to an inability to make quick, effective decisions (Fernie et al., 2017). Affectively, an approaching deadline ultimately causes passive procrastinators to feel pressured, therefore creating pessimistic thoughts regarding their ability to achieve good results (Wessel et al., 2019). Also; they having trouble concentrating on the work at hand and find themselves drawn to more entertaining activities instead of the activity itself (Aziz, S. et al., 2019). Postponement is a behavior that is predicted by passive procrastination but not by active procrastination (Wessel et al., 2019; Tudose;2021).

Nurses who are passive procrastinators tend to underestimate the amount of time required to complete tasks and may eventually give up, which can lead to failure and poor performance. They may also exhibit low control (i.e., a lack of desire to manage the work environment), a high level of anxiety, difficulty making decisions, and other traits associated with dependent personalities also have self-regulation failure (Barabanshchikova et al.,2018; Zhang et al.,2022; Chiu et al.,2020).

Consequently, passive procrastinators in the nursing profession are frequently characterized as being lethargic, reliant on others to assume accountability and finish tasks, prone to time wastage, and spending excessive amounts of time on personal or non-work-related activities as a means of escaping difficult situations (Barabanshchikova et al., 2018). Moreover; lack of effective time management abilities and a self-regulation failure, and consider the passive procrastination behavior as detrimental to group success. If passive procrastinators nurses shift responsibility for the group assignment task to others, passive procrastinators nurse have low active intent to delay, low pressure preference, and poor ability to meet deadlines; (Chiu et al.,2020).

Significance of the study:

Studying procrastination behavior among nurses in the context of critical care units is of paramount importance (Babaie et al., 2022). This is because critical care units have unique dynamics that create a relentless and fast-paced atmosphere, often leading to feelings of overwhelming pressure and exhaustion among critical care nurses (Zhang et al., 2023) thus eradicating procrastination behavior among nurses are definite and urgent needs for both contemporary and future nursing practice.

Aim of the study:

This study aims to assess the prevalence of procrastination behavior among critical care nurses. Also, this study aims to identify forms of procrastination behavior exhibited by nurses at critical care units.

Research Questions:

- What is the level of the procrastination behavior among critical care nurses?
- What are forms of procrastination behavior among critical care nurses?

Materials and Method

Research design: A descriptive research design was used to carry out this study.

Setting: The study was conducted at all critical care units of Alexandria Main University Hospital (N= 23).

Subjects:

Out of 415 nurses working in the previous mentioned units, 360 were recruited conveniently to collect necessary data. They provide direct, indirect care with at least 6 months of experience and they are willing to participate in the study.

Tools:

Two tools were used to conduct this study:

Tool I: New Active Procrastination Scale (NAPS):

New Active procrastination scales (NAPS) was developed by (Chu & Choi, 2005) as a 12-item scale to measure active procrastination behavior among nurses and was later modified into a 16-item measure (Choi & Moran, 2009). the modified version of NAPS was adopted to conduct this study. The NAPS focuses on four dimensions of active procrastination: a preference for pressure (4 items), an intentional decision to procrastinate (4 item :), an ability to meet deadlines (4 items), the ability to create a satisfactory outcome (4 items). The responses was obtained using 7 points Likert scale ranging from not at all true (1) to very true (7). Internal consistency was high: the overall Cronbach's alpha score was (α= .80) for the global scale. Scoring of all the items is in reversed form except items no. 9, 10, 11, and 12 (Choi & Moran, 2009). The overall score of active procrastination behavior among nurses range from 16 to 112. The range from 16-48 indicates a low level of active procrastination behavior among nurses. The range from 48-80 indicates a moderate level of active procrastination behavior among nurses. The range from 80-112 indicates a high level of active procrastination behavior among nurses.

Tool II: Unintentional Procrastination scale (UPS)

Unintentional procrastination scale (UPS) was developed by (Fernie et al., 2017) and it was adopted to assess passive procrastination behavior among nurses. The UPS is consisted of six items that were measured thorough using a 4-point Likert scale ranging from don't agree (1) to very much agree (4), with a single-factor structure. Internal consistency was high: the overall Cronbach's alpha score was .89 for the global scale (Fernie et al., 2017). The overall score of passive procrastination behavior among nurses' range from 6 to 24. The range from 6-11 means low level of passive procrastination behavior among nurses. The range from12-17 means moderate level of passive procrastination behavior among nurses. The range from18-24 means high level of passive procrastination behavior among nurses.

In addition to, personal data and work-related characteristic sheet was developed by the researcher and consist of questions related to: nurses` age, gender, marital status, education qualification, year of experience in nursing profession, working unit, social status.

Method

Approval from the Research Ethics Committee (REC) - Faculty of Nursing and Alexandria University was obtained before conducting the study Permission no. IRB00013620 (24-12-2023). Allowed permission from the Dean of the Faculty of Nursing, Alexandria University to conduct the collecting data for the current study was obtained. The official letter was directed to Alexandria Main University General Hospital authority to have its agreement to conduct the research after explaining the aim of the study.

English versions of the tools were translated into Arabic, and a back-to-back translation method was used. The study tools were investigated for their face and content validity by a Jury of five experts in the related field of the study. The reliability of the study tools was done to test the internal consistency of the items using Cronbach Alpha for the new active procrastination Scale (α =0.928) and unintentional procrastination scale (α=0.870.). A pilot study was conducted on (10%) of healthcare providers (n=36). Data collection took two months from the beginning of January 2024 to end of February 2024.

Ethical Considerations

A written informed consent from the health care providers was obtained after providing an appropriate explanation about the aim of the study. Confidentiality of data was maintained. The anonymity and privacy of the study subjects were kept. Subjects participated in the study voluntarily and had the right to withdraw at any time from the study.

Statistical Analysis

Data collected was processed, revised, coded, and transformed into a specially designed format to be suitable for computer feeding. All entered data were verified for any errors. Data were analyzed using SPSS

(statistical package for social science) with version 25. Data were described using numbers, minimum, maximum, arithmetic mean, standard deviation. Categorical variables were described using frequency and percentage. All statistical analysis was done using two tailed tests and an alpha error of 0.05.A P-value less than or equal to 0.05 was statistically significant.

Results

Table (1) illustrates that 70.3% of nurses aged less than 30 years with mean age 28.29±7.34., while 7.5% of them aged 40 to 59 years. Moreover, 63.1% of nurses were females. More than two third of the studied nurses (69.7%) had a bachelor degree of nursing whereas the lowest percentage (1.9) had master degree of nursing. The table reveals that more than three quarters of nurses (77.5%) had from 1 to less than 10 years of experience in nursing whereas the lowest percentage (7.2%) had 20 to 29 years of experience in nursing with mean7.84±6.67 and range <1 – 36. As regards the previous attendance of courses about procrastination the majority of studied nurses (98.9%) didn`t attend whereas (1.1%) attend courses related to procrastination.

Table (2) reveals that mean score of active procrastination behavior of nurses is 65.1 ± 12.2. Regarding dimensions of active procrastination behavior; intentional decision to procrastinate recorded the highest mean percent score (58.6% ± 25.8%) followed by ability to meet deadlines (52.8% ± 25.8%). On other hand; ability to create satisfactory outcome recorded the lowest mean percent score (42.8% ± 28.7%) followed by preference for pressure (50.5% ± 25.3%). Also, same table reveals that mean score of unintentional procrastination behavior of nurses is13.8 ± 4.7 with mean percent score is 43.5% ± 25.9%.

Table (3) Table 3 portrays the distribution of nurses regarding their perceived level of active and passive procrastination behavior. The highest percentage of nurses (80.0%) had a moderate perceived level of active procrastination behavior compared to 11.9% of them who had high perceived level of active procrastination behavior and 8.1% of them had low perceived level. Also, same table revealed that slightly less than half of nurses (45.3%) had moderate perceived level of unintentional procrastination behavior compared to 22.5% of them who had high perceived level and 32.2% of them had low perceived level. Furthermore, there is no statistically significant differences among nurses regarding the level of active and unintentional procrastination behavior (χ^2=2.01 & P=0.366; χ^2=2.01& P=0.80 &P= 0.669) respectively.

Table (4) shows that there is a statistically significant differences between active procrastination behavior and nurses' demographic charactertics such as age (F=3.863 & p= 0.004), qualification (F=7.175 & p<0.001), years of experience in the current unit (F=2.613 & p= 0.035), and years of experience in nursing profession (F=6.257 & p<0.001). On the other hand, there is no statistically significant difference between the level of active procrastination and nurses' gender (t=0.041 & p= 0.967), and previous attendance of workshop or courses related to time management (t=0.391 & p= 0.696). Meanwhile; there is a statistically significant differences between passive procrastination behavior and nurses' demographic charactertics such as age (F=3.748 & p= 0.005), qualification (F=7.584 & p<0.001), years of experience in the current unit (F=5.208 & p<0.001), and years of experience in nursing profession (F=8.256 & p<0.001). On the other hand, there is no statistically significant difference between the level of passive procrastination and nurses' gender (t=1.708 & p= 0.088), and previous attendance of workshop or courses related to time management (t=0.399 & p= 0.717).

Discussion

Building productive nursing practice require eradicating counterproductive behaviors like procrastination behavior (Aalbers et al., 2022). Nurses' procrastination behavior is one of the key issues that gain prominence in the recent context as it contributes significantly to the decline of health care organization (Babaie et al., 2022). Investigating the prevalence of this behavior and factors that cultivate it is one of research priorities toward sustainable productive nursing practice (Przepiorka et al., 2023). The current study aims to assess the prevalence of procrastination behavior among nurses. The current study goes beyond classical passive procrastination behavior and shed light on the active form of procrastination among nurses. This study reveals that procrastination behavior is moderately prevalent among nurses.

Interestingly; the current study found that active and passive procrastination behavior is

prominent since 80% of nurses had moderate level of active procrastination with overall mean score is 65.1 ± 12.2 and 45.3% of them had moderate level of passive procrastination with overall mean score is 13.8 ± 4.7. These levels of in the current study is expected due to several contributing factors. These factors could be classified into personal factors and work place related factors. Personal factors include; the dominance of females in this study who had high tendency to procrastinate due to multiple roles overload.

Moreover, qualification is another personal factor since there is a considerable percentage of participants (28.4%) had diploma with associated degree where there is no curriculum regarding procrastination taught to them and time management in their curricula received little attention. As related to age, the most of nurses (70.3%) had less than 30 years with a high level of impulsivity. Many factors among this group make them procrastinators like easily distraction, low self-regulation, increase in task aversion, lack of time management abilities, lack of control, lack of interest and perfectionism, and unwillingness to take extra responsibility, less decisiveness, high anxiety, and not have certain talents (Babaie et al. 2022).

Years of experience is another personal factor that added to high level of procrastination behavior in current study since considerable percentage of participant (77.5%) had 1to less than 10 years of experience. Limited number of years of experience is associated with high tendency to procrastinate. This may be attributed to those with limited years of experience does not have enough time to receive training related to time management.

As related to work place related factors that contribute to high level of procrastination. Nurses working at this critical units have heavy work load and decrease in motivation and mandatory overtime, a severe workload throughout the shift, a lack of recognition for their contributions, bad workplace incentives and sanctions, stressful work environment, professional role ambiguity, lack of interest and desire, boredom at work, burnout. Timely care in critical care units, depending on the sensitivity of care and the specific situation of patients, is known as a professional challenge so procrastination in work has detrimental effects such as poor quality of care, dissatisfaction patients, missed deadlines, decreased job satisfaction, and an increase in morbidity and mortality, among other negative effects on one's performance. Consequently, it is very important for nurses to manage time, and overcome procrastination through implies urgent strategies must implement to control this issue through establishing goals, and encouraging healthy habits. Motivate staff these actions can also raise levels of self-control, give them quite good temporal leadership, which helps them manage their time more effectively.

These reasons are supported by the results of Hen et al. (2018) who revealed that professional role ambiguity and situational determinants were the primary reasons for procrastination. In this context; Hutmanová et al., (2022) & Johansson et al., (2023) revealed that stressful work environment and the lack of interest and desire are the main reasons for procrastination. Moreover; Ma et al. (2021) found that work procrastination is associated with burnout.

This finding is the case in the studies of Basirimoghadam et al., (2020) and Babaie et al., (2022) and Moghadam et al., (2019) and Ma et al., (2021) these studies found considerable prevalence of procrastination behavior among nurses. In this context; Mohamed, et al., (2020) who found that the highest level of procrastination (52.8%) among nurses working at Minia University Hospital compare with gynecology, obstetric and pediatric university hospital and minia psychiatric mental health and addiction hospital as (37.2 % & 19.6%) respectively. Moreover; the work of Zeng et al., (2024), and Abd El-Salam et al., (2022) revealed moderate level of procrastination behavior among nursing student. The study of Ali et al., (2022) found that high level of procrastination behavior among medical student. On the other hand, the findings of Rezaei et al., (2017) declared that low level of procrastination among nursing staff. Moreover, Yarmohammadian et al., (2016) reveal that nearly three quarter of the staff nurses had low procrastination. This may be explained by the culture difference and good hospital services and available resources that facilitate task performance.

This result is supported by Chu and Choi (2005); Choi & Moran (2009); Fernie et al.

(2017); and Wessel et al. (2019) who found that passive procrastinators are traditional procrastinators who put off their tasks until the last minute because of being incapable to make timely decisions and to act accordingly. Cognitively, they do not intend to procrastinate, but they often end up postponing tasks due to their inability to make timely decisions and thereby act on them quickly. While active procrastinators make intentional decisions to procrastinate due to their strong motivation to work under time pressures. These studies also found the majority of active procrastinators had positive outcomes and achieve their objectives which is contrary to passive procrastinators.

Moreover; Sanecka (2022), Onuegbu (2020); Kim (2017); Sundaramoorthy, (2018); and Krispenz (2019) declared that active procrastination results in positive, satisfactory outcomes. On the contrary, passive procrastination is characterized as a dysfunctional type of task delay, treated as a result of an inability to plan own actions and meet deadlines. Moreover, Aziz (2019); Zohar (2019); Kim (2017) clarified that correlations between big five personality traits are visible among passive procrastinators than active ones.

The findings of this study have broader implications for understanding and managing procrastination within the nursing profession. Recognizing that not all procrastination is detrimental, healthcare organizations, managers, and educators can take proactive steps to promote active procrastination among nurses. This could involve providing opportunities for nurses to engage in continuing education, professional development, or self-care activities during downtime, leading to a more well-rounded and productive workforce. Moreover, the study highlights the importance of cultivating a supportive organizational culture that encourages nurses to embrace active procrastination while discouraging passive procrastination. Policies that encourage self-management skills, time management workshops, and open communication channels can empower nurses to better understand and manage their work tasks, ultimately benefiting patient care and nursing outcomes. All in All; the current study found the road toward nursing productivity is not paved efficiently since there is a considerable level of challenges like procrastination behavior among nurses.

Conclusion:

The current study shed light on procrastination behavior among nurses, it is evident that the future of nursing productivity and quality of nursing care is at high risk with expected decline rate since procrastination behavior is moderately visible among nurses which necessities urgent measures to be taken to buffer its negative effects on nursing profession and patient care. Furthermore; the current study revealed that nurses' procrastination behavior can take two forms; passive and active. Both forms are practiced moderately by nurses.

Recommendation

Based on the findings of the present study, the following recommendations are suggested:

A-Nurse leaders and policy makers

1.Select staff nurses from the first stage in recruiting nurses have certain talent as time management ability.

2.Provide orientation program to new staff to inform them about negative effect of procrastination behavior as well as risks to organization and patients.

3.Provide supportive working conditions through availability of adequate staff and resources to decrease workload and provide high quality care.

4.Adopt management by objectives strategy among nurses with high vulnerability to procrastination.

5. Assess procrastination among nurses on regular time and use proactive steps to find nurses who had high vulnerability to procrastination.

B- Nurse educators and curriculum planners

1.Providing opportunity to add the new curriculum contain issue of procrastination behavior to teach it to nursing students to increase their awareness and to avoid risks that may occur in the work environment resulting from lack of knowledge.

2.Incorporating time management skills in nursing curricula.

3.Highlighting the concept of active procrastination at nursing courses.

Table (1): Personal and work-related data of the study subjects (N=360).

Demographic Data		N=360	
		No	%
Age group (years)	20-<30	253	70.3%
	30-<40	80	22.2%
	40-59	27	7.5%
	Range	**20 – 58**	
	Mean±S.D.	**28.29±7.34**	
Gender	Males	133	36.9%
	Females	227	63.1%
Qualification	Diplom	24	6.7%
	Specialized diplom	78	21.7%
	Bachelor	251	69.7%
	Master	7	1.9%
Years of experience in nursing	<1Year -<10 Years	279	77.5%
	10-<20 Years	55	15.3%
	20-29 Years	26	7.2%
	Range	<1 – 36	
	Mean±S.D.	7.84±6.67	
Years of experience in the current unit	<1 Year	97	26.9%
	1-<10 Years	228	63.3%
	10-29 Years	35	9.7%
	Range	**<1 – 29**	
	Mean±S.D.	**3.76±4.64**	
Previous attendance of workshops or courses related to time management	Yes	4	1.1%
	No	356	98.9%
Degree of usefulness of workshops or courses related to time management	Useful	N =4 4	100% 100%
	To some extent	-	0%
	Not	-	0%
Place of attendance	Educational setting	2	50%
	Health care setting	1	25%
	Others	1	25%

Table (2): Mean Score of Procrastination behavior among Studied Nurses.

Scale / Dimension	No. of Items	Mean ± S.D.	Mean %± S.D%
New Active Procrastination Scale (NAPS)	**16**	**65.1 ± 12.2**	**51.2% ± 12.7%**
Preference for Pressure	4	16.1 ± 6.1	50.5% ± 25.3%
Intentional Decision to Procrastinate	4	18.1 ± 6.2	58.6% ± 25.8%
Ability to Meet Deadlines	4	16.7 ± 6.2	52.8% ± 25.8%
Ability to Create Satisfactory Outcome	4	14.3 ± 6.9	42.8% ± 28.7%
Un-Intentional Procrastination Scale (UPS)	**6**	**13.8 ± 4.7**	**43.5% ± 25.9%**

Table (3): Levels of Procrastination behavior among Nurses.

	Males (n=133)						Females (n=227)						**Overall (n=360)**						**Test of Significance**	
	Low		**Moderate**		**High**		**Low**		**Moderate**		**High**		**Low**		**Moderate**		**High**			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**χ^2**	**p**
New Active Procrastination Scale (NAPS)	**14**	**10.5%**	**102**	**76.7%**	**17**	**12.8%**	**15**	**6.6%**	**186**	**81.9%**	**26**	**11.5%**	**29**	**8.1%**	**288**	**80.0%**	**43**	**11.9%**	**2.01**	**0.366**
Preference for Pressure	34	25.6%	50	37.6%	49	36.8%	58	25.6%	101	44.5%	68	30.0%	92	25.6%	151	41.9%	117	32.5%	2.18	0.337
Intentional Decision to Procrastinate	25	18.8%	48	36.1%	60	45.1%	37	16.3%	71	31.3%	119	52.4%	62	17.2%	119	33.1%	179	49.7%	1.79	0.408
Ability to Meet Deadlines	36	27.1%	53	39.8%	44	33.1%	43	18.9%	85	37.4%	99	43.6%	79	21.9%	138	38.3%	143	39.7%	4.99	0.082
Ability to Create Satisfactory Outcome	47	35.3%	45	33.8%	41	30.8%	93	41.0%	81	35.7%	53	23.3%	140	38.9%	126	35.0%	94	26.1%	2.56	0.278
Un-Intentional Procrastination Scale (UPS)	**40**	**30.1%**	**60**	**45.1%**	**33**	**24.8%**	**76**	**33.5%**	**103**	**45.4%**	**48**	**21.1%**	116	**32.2%**	163	**45.3%**	81	**22.5%**	**0.80**	**0.669**

* Significant at p<0.05

** Moderately Significant at p<0.01

*** Highly Significant at p<0.01

Table (4): Relationship between sociodemographic data of nurses and their both active and passive procrastination behavior

Demographic characteristics	APS	UPS
	Mean ± SD	Mean ± SD
Age		
<20	71.50±11.74	17.50±2.68
20-<30	66.27±12.03	14.17±4.67
30-<40	62.56±12.08	12.93±4.58
40-<50	56.09±11.63	11.27±4.88
50-60	62.94±11.30	12.81±4.13
F(p)	3.863* (0.004*)	3.748* (0.005*)
Gender		
Male	65.17±12.88	14.38±4.81
Female	65.11±11.79	13.52±4.56
t(p)	0.041 (0.967)	1.708 (0.088)
Qualifications		
High school Diploma	62.67±10.92	12.67±5.18
Bachelor	63.40±9.53	12.83±4.40
Post-graduation specialized diploma	65.36±12.68	14.06±4.55
Master	84.57±7.39	20.86±2.85
F(p)	7.175 *(<0.001*)	7.584* (<0.001*)
Years of experience in the current unit		
<5	66.27±12.13	14.26±4.52
5-<10	63.23±13.0	13.77±5.21
10-<15	61.17±9.51	9.50±2.73
15-<20	57.80±8.42	11.80±4.24
≤20	60.71±10.67	12.86±3.39
F(p)	2.613* (0.035*)	5.208* (<0.001*)
Years of experience in nursing profession		
<5	68.72±12.18	15.20±4.27
5-<10	64.66±11.97	13.89±4.75
10-<15	60.79±10.92	11.29±4.56
15-<20	60.00±10.22	11.29±3.80
≤20	60.15±11.75	12.19±4.30
F(p)	6.257* (<0.001*)	8.256* (<0.001*)
Previous attendance of workshops or courses related time management skills		
No	65.10±12.12	13.82±4.62
Yes	67.50±19.12	15.50±8.43
t(p)	0.391 (0.696)	0.399 (0.717)

t: Student t-test F: F for ANOVA test *: Statistically significant at $p \leq 0.05$

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