Assessing Mentoring Effectiveness in Nursing Education: Students' Perspectives

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Abstract

Background: Academic mentoring is essential for keeping students in the medical field. There is a perceived shortage of academic mentoring in the healthcare profession, according to many academic healthcare students and faculty. Mentor who creates mentoring connections embraces a commitment to the success of the university and the students to be lifelong learners. **This study aimed** to assess mentoring effectiveness in nursing education as perceived by students. **Research design**: A descriptive research design was utilized to conduct this study. **Setting and Subjects: Setting:** The present study was carried out at Faculty of nursing, Damanhour University. The participants in this study included all undergraduates nursing students who were registered for 4^{rth} level (N= 432) who were available during time of data collection. **Tools**: Principles of Adult Mentoring Inventory Instrument (PAMI) was adopted by the researchers to conduct the study. **Results:** According to descending rank of mean percent scores, the highest mean was for relationship emphasis followed by employee vision while the lowest mean was for mentor model. **Conclusion**: The current study revealed that nursing educators had a low level in all mentoring effectiveness behavior dimensions as perceived by nursing students at Faculty of nursing, Damanhour University. **Implications for Nursing Management:** new and innovative mentoring program should be implemented to foster the continued growth and development of the mentor and mentees in Faculty of nursing, Damanhour University and there is a critical need for research on developing a strategy to promote mentoring effectiveness between mentors and mentees in nursing education.

Introduction

Academic mentoring is essential for keeping students in the medical field. There is a perceived shortage of academic mentoring in the healthcare profession, according to many academic healthcare students and faculty. For many years, there has been a nursing shortage in the healthcare industry due to a lack of mentoring [1,2].

When faculty support and mentor students, a foundation for academic mentoring skills in the healthcare profession is built. Students learn how to treat others when they become mentors and are no longer the mentees through observing how instructors model mentorship in both clinical and theoretical settings [1]. Nurses and nursing students will be retained and their academic performance will be improved if academic mentoring is successfully introduced and promoted [2,3].

In order to give relationship-based support that enhances one or more areas of the mentee's development, mentoring is defined as a process that occurs between young

people (i.e., mentees) and older or more experienced people (i.e., mentors) [3]. A mentor is "a coach, advice provider, counsellor, guide, role model, and experienced facilitator,"

The term "mentee" refers to a person who receives mentoring. The term "mentoring perception" describes how mentors and mentees see their respective mentoring relationships [4]. Mentoring effectiveness is defined as the ability of nursing educators (mentors) to maintain effective communication with nursing studens (mentees), upgrading their knowledge, competencies, and attitude to promote educational process [5].

Genuine, empathetic, caring, dependable, and courteous people are qualities that define mentors. A mentor is also said to be a great communicator, a team player, and someone who develops a special bond with the mentee over time to support the mentee's future success [1]. Mentors who create mentoring connections embrace a commitment to the success of the university and the students as well as being lifelong learners [4].

The objectives of mentoring depend on the mentee's requirements and what they are expected to learn. All mentor-mentee goals must outline a course for professional growth, provide succinct, clear instructions on how to perform a task effectively, and give more than one approach to achieving the goals together [5,6]. Mentors are knowledgeable about different civilizations, cultural diversity, and different schools of thought. When mentoring young people, it's crucial to comprehend the wide range of diversity. Mentors impart social skills, shared governance, and career paths to mentees, who are frequently students. Mentors encourage their mentees' safety, security, and comprehension [6]. Nursing programs require

faculty mentors to help nurses transition to the academic environment. It is crucial to foster an environment that will help a new nurse educator make the transition from practice to academics [3]. The environment for mentoring has a significant impact on the profession as a whole. Positive mentoring and nursing faculty recruitment and retention are directly related [7,8].

The six following dimensions can be used to evaluate the success of mentoring in nursing education as seen by mentees including: confrontational focus, employee vision, facilitative focus, informative emphasis, mentor model, and relationship emphasis. Respectfully challenging the mentee's justifications for or avoidance of decisions and activities pertinent to their development as adult learners is the definition of confrontational focus [8]. The goal is to support mentees in gaining awareness of counterproductive tactics and habits and in assessing their readiness and need for change. Employee vision is the development of a mentee's critical thinking in relation to imagining their own future and maximizing their potential on both a personal and professional level [9]. The aim is to support mentees as they navigate personal transformations and take initiative as independent adult learneras they move through life's events [10].

Additionally, facilitative focus is defined as assisting mentees in considering alternative views and options while coming to their own decisions about realistic, personal, academic, and career goals by leading them through a reasonably in-depth review and exploration of their interests, abilities, ideas, and beliefs [8]. Additionally, informative emphasis is

described as the direct asking for particular information regarding mentees' present objectives and progress in achieving their personal, academic, and career goals, as well as the offering of specific ideas to them. The goal is to guarantee that counsel is based on sufficient and accurate understanding about each mentee [9,10]

In order to personalize and expand the relationship, the mentor model is often described as the sharing of life experiences and feelings as a "role model" with mentees. The goal is to inspire mentees to take the required risks, make decisions without assurance of favorable outcomes, and overcome obstacles in their path to achieving their academic and professional objectives [8]. Additionally, the capacity to communicate a sincere understanding and acceptance of the mentee's sentiments through active, empathic listening is referred to as relationship emphasis.   The goal is to foster a psychological environment of trust so that mentees can openly discuss and reflect on their individual experiences as adult learners, both positive and bad [9,10].

Faculty members should use positive role-modeling with nursing students to encourage mentoring [11]. The aforementioned is accurate since an academic mentor starts developing connections that encourage intellectual and emotional development. Nursing students learn from their nurse educators, who are frequently thought of as academic mentors, much as children learn from their parents. Nursing students learn from what they see in action, not just from what they observe in the classroom, therefore faculty members must enforce professional boundaries and keep the standard of rigor   high [12]. The mentoring atmosphere for students should be one of safety, protection,

tolerance for difference, and politeness. Mentoring takes place in the classroom, in medical settings, in lab settings, and even in public settings. Security, safeguards, transparency, diversity, and a respectful environment should all be present in a student's mentoring environment [5].

Students observe how to move about and function in their surroundings by observing and imitating their assigned mentors. Therapeutic communication and how to treat others with respect and compassion are taught to nursing students. Mentors help their mentees through difficult situations by serving as positive role models [13]. For instance, when a mentee observes how a mentor responds to and engages with others through a variety of experiences, the mentor serves as an example of what it means to be a mentor. Mentors should also be open and honest about their own behavior when mentoring mentees (students) [12]. Academic tutoring is of inestimable importance to their current and future professional aspirations. This is accurate because mentoring helps to keep nurses and students in our field. Students need to learn about and see from nurse educators a desire to succeed [11]. If students don't have favorable experiences with academic mentoring, there's a chance that this will lead to a shortage of healthcare professionals in the future [14].

Potential nurses leave the nursing field before beginning nursing profession due to lack of supportive mentoring. Negative experiences can result in low self-esteem, elevated anxiety, medication mistakes, and a reduction in attention span, all of which can contribute to student burnout [15]. Poor mentoring's emotional effects can include anxiety,

depression, a lower capacity for adaptation, low self-esteem, and a diminished feeling of purpose. However, the mentee is more likely to feel purposeful if they feel supported. Additionally, when the mentee advances professionally, they feel like they belong, forge positive working connections that boost confidence, and experience less worry [16] Working through the phases related to feeling supported is where a new faculty member demonstrates the depth of resilience [10]. All parties involved will benefit if strong, healthy friendships and relationships are formed while students or new nurses are still learning, and these mentees will likely become the sought-after mentors of tomorrow [17]. Role modeling, nurturing, friendship-building, paying it forward by sharing experiences, effectively meeting on a regular basis, and demonstrating to the mentee the perseverance needed to succeed in the nursing sector and in nursing academics are all qualities of a good mentor [7]. The lack of qualified healthcare personnel may diminish with the implementation of high-quality mentoring [18].

In one's academic career, faculty mentoring is equally as crucial as student or new graduate mentorship, and a faculty member's needs will change depending on where they are in their career [8]. Lack of mentoring might cause new nurses to leave the nursing profession, which adds to the nursing shortage [7]. Lack of mentoring causes nurses to feel less supported in their careers. The nursing shortage, which has been an issue for years, is exacerbated by nurses who feel they are not supported in their work [14]. A faculty member who is just starting out in their careers could need a different kind of support than a faculty member who is further along. Although mentoring in academics can take many different forms, it is important to understand that mentoring entails a continuous, changing connection between two individuals [19].

Significance of the study

The education of pre- and post-licensure nursing students is the responsibility of nursing institutions and universities in order for them to enter the nursing profession competently [1]. As a result, it is the duty of nursing colleges and universities to make sure that new nurse educators receive enough mentoring to prepare the next generation of nursing professionals. Mentoring should be valued in nursing education, and faculty development will benefit much from quantifying its effectiveness [9]. It is critical for nursing academia to ascertain whether current mentoring programmes are advantageous to the development of nurse educators because there is a void in the literature about the consistency of mentoring in nursing education [10]. In order to improve mentoring for new nurse educators and to improve the mentoring behaviors of nurse educator mentors, it is crucial to assess mentoring concerns by looking at the effectiveness of mentoring from the viewpoints of the mentee [20].

Theoretical framework for the study

Bandura's (2001) [21] social cognitive theory served as the theoretical foundation for the research. Social cognitive theory (SCT) implementation could facilitate learning through observation of the designated mentor and the desire to imitate what was observed. The mentee observed the faculty mentor activities, processed them intellectually, and then imitated them in an effort to learn the concepts and behaviors they had just seen.

The mentoring process enables the mentee to make the required adjustments to enhance learning through analytically analyzing observed behavior. Through modeling, the mentee can assess their own performance so that they can improve their results [5]

Aim of the study

This study aimed to assess mentoring effectiveness in nursing education as perceived by students.

Research question

What is mentoring effectiveness level of nurse educators as perceived by nursing students in faculty of Nursing, Damanhour University?

Research design

A descriptive research design was utilized to conduct this study.

1.1. Setting

The present study was carried out at Faculty of nursing, Damanhour University.

1.2. Subjects

The participants in this study included all undergraduates nursing students who were registered for 4th level because they had four years of contact with their mentors which was a long duration that enabled 4th level nursing students to evaluate mentoring effectiveness of their nursing educators precisely, (N= 432) who were available during time of data collection, faculty of Nursing, damanhour university.

1.3. Study Instrument

Principles of Adult Mentoring Inventory Instrument (PAMI):

The Principles of Adult Mentoring Inventory (PAMI) instrument developed by Cohen, (1995b) [22] was adopted by the researchers to conduct the study. The PAMI is a 55-item survey instrument was developed to provide a measure of mentoring effectiveness based on the six mentoring behavioral functions included

relationship emphasis, information emphasis, facilitative focus, confrontive focus, mentor model, and employee vision. Each of the items in the PAMI were responded using a 5-point Likert scale with responses ranging from (1) never, (2) infrequently, (3) sometimes, (4) frequently, and (5) always. The six behavioral functions are represented by a predetermined subset of the 55-items instrument determined clarify the interactions that should occur throughout the mentor-mentee relationship. The mentee (nursing students) survey provided an assessment of the mentor's (nursing educator's) ability as a mentor from students' perspective.

The sum of these items were used to provide an ultimate measure of mentoring effectiveness for each behavioral function across a continuum.   The overall score of mentoring effectiveness ranging from 55 to 275. Lower score of mentoring effectiveness ranging from 55 to 128, moderate score ranging from 129 to 201, and higher score ranging from 202 to 275. The mean scores used to measure mentoring effectiveness across the continuum and each behavioral function included different numerical range based on the point system as determined by Cohen, (1995b) [22].

In addition, nursing students' socio-demographic data sheet was developed by the researchers, to elicit data such as age, gender, marital status, current academic year, when you meet your mentor? Do you work private?

1.4. Data collection

-An approval from the Ethical Research Committee, Faculty of Nursing, Damanhour University was obtained to carry out this study.

-The study tool (PAMI) was reviewed and

tested for face and content validity by five bilingual academic professors in the field of study. Accordingly, their comments are taken into consideration for ensuring accuracy and minimizing potential threats to validity of the study.

-The study tool (PAMI) was examined for reliability by measuring the internal consistency of items using Cronbach's alpha. The results proved that the tool was reliable with a correlational coefficient test. The tools proved to be reliable were α= 0.853

-Pilot study was carried out in the study settings to test the clarity, feasibility, applicability of tools and estimate the time required to complete the study questionnaires on 10% of the study subjects (n=35) who were excluded from the study subjects to prevent data contamination.

Data were collected during the extra-curricular hours of the students in the 2020-2021 academic year. The questionnaire was hand delivered to 4th level nursing students in faculty of Nursing, Damanhour University after explaining the objective of the study. The duration of completing the questionnaire was about 20–25 minutes. Data was collected from October 2020 to April 2021.

1.5. Ethical considerations

A formal permission has been obtained from Research Ethics Committee and the Dean of the Faculty of Nursing, Damanhour University to conduct the current study. An informed consent was obtained from the students after explanation of the aim of the study. The confidentiality and anonymity were assured through assigning a code number for each student instead of names to protect their privacy. The right to withdraw from the study has been guaranteed at any time. Students were assured that data are confidential and used only for research purposes.

1.6. Data Statistical Analysis

Data were coded by the researchers and statistically analyzed using Statistical Package for the Social Science (SPSS) version 25. Cronbach's alpha correlation coefficient was used to test study's tools for internal reliability. Frequency and percentages were used for describing demographic and professional characteristics. Arithmetic mean and standard deviation (SD) were used as measures of central tendency and dispersion, respectively, for quantifying variables under the study. Pearson correlation coefficient analysis (r) was used to test the nature of the relationship between the six behavioral dimensions of the study variable. Regression analysis ($R2$) was run to test the predictive power of independent variable (students' demographic characteristics) on the dependent variables (mentoring effectiveness). Significance of the obtained results was judged at the 5% level.

Results

Table 1 shows that, the highest percentage of students (41.4%) had 21 years old and the lowest percentage of students (28.5%) had 22 years old while (85.6%) of them were female and only (14.4%) were male. Pertaining to marital status the majority of students (91.2%) were single and the minority of students (8.8%) were married and more than two thirds (72.2%) of them work in private while only (27.8%) of them did not work in private. Also, (59.7%) of the students met their mentors during the first term of the academic year 2019/2020, (22.9%) of students met their mentors during registration but only (17.4%) of them had no specific time to meet their mentors.

In table 2. The mean percent score and standard deviation of mentoring behaviors dimensions. Total mentoring behavioral dimensions score is (42.83 ± 25.63). Dimensions of mentoring behavior as perceived by fourth year nursing students could be ranked in a descending order as follows; relationship emphasis (45.54 ± 25.12), employee vision (45.42 ± 27.88), facilitative focus (42.48 ± 28.37), information emphasis (42.30 ± 26.99), confrontive focus (40.77 ± 23.73) respectively and finally mentor model (39.88 ± 29.49).

Table 3 shows the correlation matrix between all mentoring behavior dimensions, it could be seen from the table that there are statistically significant positive strong correlations were found between all mentoring behavior dimensions where all Ps = (0.001)

Table 4 reveals that, there is a statistically significant relationship between all mentoring behavior dimensions and: students` age where P= (0.001) and with private work where P= (0.001& 0.006). Also there is a statistically significant relationship between all mentoring behavior dimensions except confrontive focus and marital status where P= (0.001, 0.015,0.019 & 0.050), and there is a statistically significant relationship between all mentoring behavior dimensions except confrontive focus and time when meet mentors where P= (0.001), while there is no statistically significant relationship between all mentoring behavior dimensions except confrotive focus& mentor model and sex.

In table 5 the results of multiple regression analysis between mentoring behavior dimensions and students` demographic characteristics where adjusted R^2=0.111, where the model is significant (F=10.601[*], p<0.001[*]). This means that 11.1 % of the explained variance of mentoring behavior effectiveness. However, table of multivariate linear regression has displayed that only the variables of mentee working private and students' meeting with their mentors in no specific time to be positively highly significant predictors of mentoring behavior dimensions.

Table 1. Distribution of fourth year students according to their demographic characteristics (n = 432)

Students' demographic characteristics	No.	%
Age (years)		
21	179	41.4
22	123	28.5
23	130	30.1
Mean ± SD	**21.89 ± 0.84**	
Sex		
Male	62	14.4
Female	370	85.6
Marital status		
Single	394	91.2
Married	38	8.8
Divorced	0	0.0
Widowed	0	0.0
Do you work private?		
No	120	27.8
Yes	312	72.2
When you meet your mentor?		
First term	258	59.7
During registration	99	22.9
No specific time	75	17.4

Table (2): Mean score and standard deviation of students` perception of mentoring behavior effectiveness dimensions (n = 432)

	Mentoring behavioral dimensions	Min. – Max.	Mean ± SD.
1	Relationship emphasis	0.0 – 80.0	45.54 ± 25.12
2	Employee vision	0.0 – 89.29	45.42 ± 27.88
3	Facilitative focus	0.0 – 75.0	42.48 ± 28.37
4	Information emphasis	0.0 – 80.0	42.30 ± 26.99
5	Confrontive focus	0.0 – 70.83	40.77 ± 23.73
6	Mentor model	0.0 – 90.0	39.88 ± 29.49
	Total mentoring behavior	1.47 – 74.26	42.83 ± 25.63

The overall score of mentoring effectiveness ranging from 55 to 275

Lower score of mentoring effectiveness ranging from 55 to 128

Moderate score ranging from 129 to 201

Higher score ranging from 202 to 275

Table 3: Correlation matrix between mentoring behavior dimensions effectiveness as perceived by fourth year nursing students (n = 432)

		Relationship emphasis	Information emphasis	Facilitative focus	Confrontive focus	Mentor model	Employee vision	Total mentoring behavior dimensions
Relationship emphasis	R		0.870^*	0.894^*	0.850^*	0.870^*	0.890^*	0.939^*
	P		0.001^*	0.001^*	0.001^*	0.001^*	0.001^*	0.001^*
Information emphasis	R			0.944^*	0.888^*	0.878^*	0.934^*	0.967^*
	P			0.001^*	0.001^*	0.001^*	0.001^*	0.001^*
Facilitative focus	R				0.912^*	0.822^*	0.913^*	0.963^*
	P				0.001^*	0.001^*	0.001^*	0.001^*
Confrontive focus	R					0.846^*	0.867^*	0.939^*
	P					0.001^*	0.001^*	0.001^*

							Mentor Model	Employee vision
Mentor model	**R**						0.886^*	0.928^*
	P						0.001^*	0.001^*
Employee vision	**R**							0.967^*
	P							0.001^*
Total mentoring behavior dimensions	**R**							
	P							

r: Pearson coefficient

*: Highly statistically significant at p < 0.001

*: Statistically significant at p ≤ 0.05

Not statistically significant at p > 0.05

Table (4): the Relationship between total mentoring behavior dimensions mean score and students` demographic characteristics(n = 432)

Demographic characteristics	Mentoring behavior dimensions						
	Relationship emphasis	Information emphasis	Facilitative Focus	Confrontive Focus	Mentor Model	Employee Vision	Total mentoring behavior dimensions
	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.
Age (years)							
21	41.51 ± 26.35	43.52 ± 24.68	45.39 ± 29.25	42.90 ± 22.20	34.19 ± 20.56	41.32 ± 23.53	41.62 ± 23.49
22	34.02 ± 23.02	29.23 ± 24.12	28.52 ± 23.97	32.32 ± 24.24	27.97 ± 29.31	39.0 ± 27.24	32.18 ± 24.14
23	62.0 ± 15.09	53.0 ± 27.60	51.67 ± 26.13	45.83 ± 23.36	59.0 ± 31.01	57.14 ± 30.51	54.56 ± 25.18
F (p)	**53.677* (<0.001*)**	**27.936* (<0.001*)**	**25.186* (<0.001*)**	**12.071* (<0.001*)**	**49.927* (<0.001*)**	**18.007* (<0.001*)**	**27.422* (<0.001*)**
Sex							
Male	49.60 ± 24.16	43.31 ± 19.52	43.41 ± 23.33	51.21 ± 21.34	50.73 ± 28.06	47.93 ± 21.29	47.69 ± 20.87
Female	44.86 ± 25.25	42.14 ±	42.32 ±	39.02 ±	38.07 ±	45.0 ± 28.84	42.01 ±

		28.06	29.15	23.69	29.37		26.28
t (p)	1.418 (0.160)	0.407 (0.685)	0.329 (0.743)	4.094* (<0.001*)	3.160* (0.002*)	0.947 (0.346)	1.904 (0.060)
Marital status							
Single	43.97 ± 25.32	41.36 ± 26.71	41.67 ± 28.41	40.33 ± 23.69	38.13 ± 28.71	44.41 ± 27.39	41.77 ± 25.40
Married	61.84 ± 15.57	52.11 ± 28.20	50.88 ± 26.83	45.29 ± 24.03	58.03 ± 31.68	55.92 ± 31.04	53.77 ± 25.81
t (p)	6.315* (<0.001*)	2.357* (0.019*)	2.010* (0.050*)	1.229 (0.220)	4.041* (<0.001*)	2.445* (0.015*)	2.741* (0.009*)
Do you work private?							
No	62.0 ± 15.10	53.0 ± 27.61	51.67 ± 26.14	45.83 ± 23.37	59.0 ± 31.02	57.14 ± 30.52	54.56 ± 25.19
Yes	39.21 ± 25.35	38.19 ± 25.62	38.94 ± 28.44	38.82 ± 23.62	32.53 ± 25.34	40.91 ± 25.45	38.31 ± 24.38
t (p)	11.451* (<0.001*)	5.265* (<0.001*)	4.420* (<0.001*)	2.785* (0.006*)	9.116* (<0.001*)	5.608* (<0.001*)	6.058* (<0.001*)
When you meet your mentor?							
First term	52.71 ± 24.02	47.64 ± 24.92	47.74 ± 28.68	41.80 ± 23.29	46.63 ± 28.42	50.47 ± 28.68	47.81 ± 25.42
During registration	38.38 ± 22.16	44.75 ± 30.41	41.41 ± 31.46	39.27 ± 26.08	28.69 ± 24.69	45.06 ± 24.86	39.96 ± 25.78
No specific time	30.33 ± 23.21	20.73 ± 16.78	25.78 ± 11.86	39.22 ± 22.07	31.47 ± 32.50	28.52 ± 21.76	29.48 ± 20.60
F (p)	32.395* (<0.001*)	33.887* (<0.001*)	18.960* (<0.001*)	0.598 (0.551)	18.296* (<0.001*)	19.563* (<0.001*)	16.801* (<0.001*)

t: SD: **Standard deviation**   **p: p value for comparing between the studied categories**
F: **F for One way ANOVA test**   **Student t-test**

*: Statistically significant at $p \leq 0.05$ Not statistically significant at $p > 0.05$
*: Highly statistically significant at $p < 0.001$

Table (5): Multivariate Linear regression for mentoring behavior dimensions as perceived by fourth year nursing students (n = 432)

Demographic characteristics	B	Beta	t	p	95% CI	
					LL	UL
Age (years)	-2.623	-0.086	0.920	0.358	-8.225	2.979
Marital status	-1.150	-0.013	0.241	0.810	-10.528	8.229
Do you work private?	-17.855	-0.312	2.843*	0.005*	-30.200	-5.510
When you meet your mentor?						
First tern	0.394	0.008	0.109	0.914	-6.748	7.537
No specific time	-10.725	-0.159	2.874*	0.004*	-18.060	-3.390
R^2=0.111, F=10.601*, p<0.001*						

F, p: f and p values for the model
R^2: Coefficient of determination
B: Unstandardized Coefficients
Beta: Standardized Coefficients
t: t-test of significance
   *: Highly statistically significant at $p < 0.001$
   *: Statistically significant at $p \leq 0.05$
    Not statistically significant at $p > 0.05$

Discussion

An effective relationship between mentor and mentee is required to encourage the mentee to enable them to attain their goal during the whole educational process. The mentors need to extend their help by sharing their knowledge and experience as well as, providing emotional support and encouragement to the mentees. Mentoring is perceived as essential to professional advancement, and career satisfaction. Thus the current study was conducted to assess mentoring effectiveness in nursing education from students' perspectives [6,9].
The results of the current study findings showed that, according to descending rank of mean scores, the highest mean was for relationship emphasis followed by employee vision while the lowest mean was for mentor model. This may be due to that nearly half of 4th level nursing students in the faculty of nursing stated that there are a strong relationship, trust and significant bonds between students and their faculty that is reflected through evaluating their learning needs and requirements, encouraging nursing students to critically think future goals, communicate individuals` feelings, experiences either negative or positive, active empathetic listening to their problems and worries for positive outcomes. On the

other hand, the lowest mean was for mentor model. This may be due to that about two thirds of nursing students mentioned that their nursing educators neither an effective role model, sharing of life experiences and feelings with mentees, inspired them to take the required risks, nor encouraged nursing students to overcome obstacles in their path to achieve their academic and professional objectives.

According to Wilkins (2018) [23] interpersonal skills and high levels of professionalism continue to be reported as the most important characteristics in a mentoring relationship. The same was found according to Nemeth et al (2020) [24] who stated that, The primary role of an effective mentor is listening to the mentee, reflecting upon the mentee's concerns, career goals, challenging nursing students to reach a higher goal, and supporting them along the way, prioritize the mentee requirements and assist nursing students in developing solutions. The same findings was reported by Olaolorunpo (2019), [25] Ali and Adel (2020) [26] who mentioned that, mentors should be supporters, facilitators, assessors, and collaborators in the mentoring relationship for building mentees trust, confidence and communication skills.

Significant positive strong correlations were found between all mentoring behavior dimensions. This result may be attributed to an effective mentoring in the faculty of nursing, Damanhour University which provides independent adult learners with a relationship of trust and respect between the mentors and mentees, willingness of the mentor and mentee to work together to make a change, availability of information,

suggestions, options and ideas that help mentees to decide and achieve academic and career goals resulting in an effective learning environment. The same was found by Merrill (2019),[27] Grant, Bloom and Lefebvre (2020) [28] who stated that, mentees quickly experienced trusted, respectful, friendly conversations with mentors in a learning environment that allowed them to ask questions without the fear of embarrassment or reprisal resulting in an effective learning environment . The same was reported by Evans (2019), [29] Chong and Thi (2021) [30] who think that a strong relationship between mentor and mentees must be built up first, and the mentees will accept suggestions from the mentor to influence them in a positive way . According to Zainol and Salam (2021) [8] a bonding between mentor and mentee with a high degree of trust and mutual respect prevents the misunderstanding and helps the learning process. A strong mentor-mentee relationship can motivate human behavior and help in learning by identifying the problems in the mentee and guiding them with appropriate teaching and support.

The result of this study indicated that, there were a statistical significant relation between all mentoring behavior dimensions and age &private work. Also there is a statistically significant relationship between all mentoring behavior dimensions except confrontive focus and marital status and there is a statistically significant relationship between all mentoring behavior dimensions except confrontive focus and time when meet mentors. While there is no statistically significant relationship between all mentoring behavior dimensions except confrotive focus& mentor model and sex. These study result is supported by Hodges (2018), [31] Molsosa, Sabé and Montserrat (2021) [32] who found that; age,

mentor time and marital status were observed to be as factors that may interfere with maintaining a mentoring relationship . In the same line Williams (2017), [33] and Kamarudin et al (2021) [34] found that, the gender of the mentees had no significant impact on their perception of mentoring system.

Conclusion

 The current study findings revealed that nursing educators had a low level in all mentoring effectiveness behavior dimensions as perceived by nursing students at Faculty of nursing, Damanhour University. Also, according to descending rank of mean percent scores, the highest mean was for relationship emphasis followed by employee vision while the lowest mean was for mentor model.

Implications for Nursing Management

 Based on the study findings, the following is recommended:

-New and innovative mentoring program should implemented to foster the continued growth and development of the mentor and mentees in Faculty of nursing, Damanhour University.

There is a critical need for research on:

 1) Mentor-mentee perceptions of their mentoring experiences in Faculty of Nursing.

 2) Developing a strategy to promote mentoring effectiveness between mentors and mentees in nursing education.

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Conflicts of Interest Disclosure

The authors declare that there is no conflict of interest.

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