

Relationship between Colleagues Solidarity and Job Motivation among Staff Nurses at Oncology Center Mansoura University



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1.ABSTRACT

Background: Colleagues solidarity and job motivation are very essential and have important for creating positive work environment and increasing nurses' wellbeing, satisfaction, retention, engagement as well as organizational performance. **Aim:** To explore the relationship between colleagues solidarity and job motivation among staff nurses at Oncology Center- Mansoura University. **Methods:** Descriptive correlational design was utilized. Two tools were utilized for data collection; colleague solidarity scale for nurses and nurses' job motivation scale. **Results:** There was highly statistically significant positive correlation between colleagues solidarity and job motivation. High percent of studied staff nurses were always perceived total colleagues solidarity. Also, high percent of them were agreed toward total job motivation. **Conclusions:** There was highly statistically significant positive correlation between colleagues solidarity and job motivation among staff nurses. **Recommendation:** Adopting strategies to enhance colleague solidarity among nurses by fostering a positive workplace through providing open channel of communication and needed support. Implementing strategies for both intrinsic and extrinsic motivation like showing recognition and appreciation for nurses work effort, offer opportunities for career development and provide rewards and wages to maintain nurses motivated.

Keywords: Collegiality, Colleague Solidarity, Job Motivation, Motivation, Staff Nurses.

2.Introduction:

Nurses are an essential element of the labor force for providing efficient and standard health care services that help patients in every stage. Colleagues solidarity and job motivation are very essential and have important impact on nurses wellbeing, satisfaction, retention, engagement as well as organizational performance. Nurses working in any work place mostly required work environment that have the optimal levels of mutual collegiality support to enhance motivation, performance and productivity as well as protecting the hospital from destructive and undesirable behaviors (Kilic&Altuntas, 2019).

Collegiality is a special situation among nurses who work together to achieve a goal by performing a certain job in an organization. Sharing of power, authority and responsibilities to accomplish a certain aim, work-related and social interactions among coworkers, cooperation in taking decisions, and carrying out these decisions characterize collegiality. Collegiality creates supportive relationships among nurses, help each other to solve problems specially that related to work

and feel with sincerity and solidarity (Göktepe, Yalçın, Türkmen, Dirican & Aydın, 2020).

Solidarity is a prevalent variable in team dynamics. Solidarity is described as psychological and social intimacy that develop between people because of trust and self-expression. Solidarity is stronger when managers improve upward and downward communication and when nurses spent a long period in the organization (MacDonald, Kelly & Christen, 2019).

Colleague solidarity is defined as the mutual support and cooperation of persons who practice a specific job, and it includes both their professional sharing of information, skills and technical issues (Kilic&Altuntas, 2019). Colleagues solidarity of nurses is the exchange of resources, thoughts, skills, needs, concerns, personal support, and is more likely to occur where nurses believe they genuinely participate in work related decisions, both in terms of institutional policy making and personal work activities. There are two types of colleague solidarity: emotional and academic solidarity. Emotional solidarity

includes feeling valuable, caring for others and paying attention, and it result in confidence, trust and providing debriefing and warm environment while academic solidarity includes sharing knowledge, skills and suggestions that improve nurses practice (Uslusoy&Alpar, 2013).

Colleague solidarity is valuable to job performance and profession improvement. It boosts the merit of nurses by allowing effective cooperation and coordination especially in difficult cases, times or work-related issues. Nurses take suggestions from their supervisors or colleagues to make use of those persons' expertise, knowledge, opinions and help. Further, nurses could express their ideas with their peers for resolving problems (Xin, Suhuan, Jingying, Ruonan, Yanhui, et al., 2018).

Colleague solidarity is one of nurses' attitudes, which affect the behaviors within an institution and have great importance to managers. It develops a sense of responsibility, and increases the sense of harmony, and trust among nurses. It has a positive impact on productivity, innovation behavior and job motivation. As nurses motivated by the support, they receive from the management and colleagues plus working in a positive mood. In addition, motivated nurses are more focusing on hospital goals and more willing to serve their patients (Gurcan, 2019).

Motivation is the translation of individual energy into effort. It is also defined as a power within persons that drives them to achieve their goals (Simone, 2015). Job motivation is defined as the person's desire to focus and maintain energy on carrying out the task to the best of one's ability in order succeed in current position (Talukder&Saif,2014). Also, it is known as the confluence of forces that affect nurses' work place behavior (Khalid, Rathore & Aslam, 2017).

There are two different types of job motivation: intrinsic and extrinsic motivation. Intrinsic motivation is an inner power that derives nurses to achieve personal and organizational goals. Extrinsic motivation is an exterior power that derives nurses to achieve

personal and organizational goals (Hee, Kamaludin & Ping, 2016).

Both external and internal motivation are effective, depending on the time and situation. In addition, prior to implementing programs for intrinsic job motivation through meeting higher order needs like self-actualization and achievement. The availability and suitability of external motivating factors by meeting lower order needs like physiological or safety needs should be applied first. Therefore, in order to hire and keep a better nurse, both extrinsic and intrinsic motivators are required (Toode, Routasalo, Helminen & Suominen, 2015).

There are several factors affecting the levels of job motivation levels and its sources. It was indicated that intrinsic motivation is positively influenced by good relationships based on confidence in the work environment. Intrinsically motivated work behaviors generating alignment of work behaviors with one's self-concept, which leads to a sense of accomplishment. This sort of motivation is controlled by individual pleasure, interest, or delight, and it entails engaging in an activity for the inherent enjoyment of the activity (Allan, Autin& Duffy, 2016).

Extrinsic motivation emerges from the influence of external activities as financial and psychosocial factors that leaders use to motivate their nurses. Remuneration and other financial benefits like fringe, premiums, benefits, and ownership in profits are considered financial variables. While, psychosocial factors encompass techniques like valuing the nurse, allowing them to work autonomously, fostering nurses' development and success, assuring their participation in sociocultural activities and creating a healthy work place (Baljoon, Banjar, &Banakhar, 2018).

Job motivation is essential for nurses' job satisfaction and performance and for meeting better organizational objectives. Additionally, it motivates and directs hospital nurses' actions. The high level of job motivation controls how committed and effective nurses are in their clinical work. Also, supporting autonomous motivation may

result in an instant rise in job engagement and a fall in work holism and burnout (**Alhakami & Baker, 2018**).

Nurses who working at oncology centres are facing a daily considerable huge of workplace incapacitating pressures, expectations and obstacles. These at least related to the majority of the patients are being treated for cancer have fatal diseases and may pass away soon. Furthermore, these nurses not only deal with patients but also with families and their fear, long hospitalizations and difficult journey of disease and therapy. All this make these nurses physical and emotional exhausted. Therefore, it is necessary for them to be able to support and motivate each other and their patient. Colleague solidarity and high motivation level among nurses provides them with support, encourage collaboration, sharing experiences and skills and the ability to control the psychosocial results of the work. Therefore, oncology centres should make a greater effort to improve colleague solidarity and job motivation at the work place in an attempting to keep oncologic nurses and advance their general welfare and their professional quality of life (**Piotrkowska, Jarzynkowski, Książek & Mędrzycka-Dąbrowska, 2019**).

2.1 Aim of the Study

Explore the relationship between colleagues solidarity and job motivation among staff nurses at Oncology Center-Mansoura University.

2.2 Research Questions:

- 1- What is staff nurses' perception of colleagues solidarity?
- 2- What is staff nurses' perception of job motivation?
- 3- Is there a relationship between colleagues solidarity and job motivation among staff nurses at Oncology Center-Mansoura University?

3. Methods

3.1 Study Design:

Descriptive correlation design was utilized.

3.2 Setting of the study:

This study was conducted at Oncology Center- Mansoura University that provides a wide spectrum of health service at Delta region, with bed capacity (500). There are eight departments (two surgical units, two medical units, hematology unit, bone marrow transplantation unit, chemotherapy installation unit and children unit). It also includes three intensive care units (surgical, medical and children) in addition to five operating rooms.

3.3 Participants:

The present study included convenience staff nurses (350) who are willing to participate in the study at the time of collecting data at the aforementioned setting.

3.4 Tools of data collection:

Two tools were utilized for collecting data namely; Colleague Solidarity Scale for Nurses (CSSN) and Nurses Job Motivation Scale (NJMS).

Tool (I) Colleague Solidarity Scale for Nurses (CSSN)

It was created by **Uslusoy and Alpar, (2013)** to assess colleagues solidarity among staff nurses. It consists of two parts:

Part 1: It encompasses personal and job characteristics of staff nurses as (age, sex, marital status, education qualification, year of experience, type of work schedules and work unit).

Part 2: It is composed of (23) items categorize into three subscales: emotional solidarity (9 items), academic solidarity (9 items) and negative opinions about solidarity (5 items).

The items of the scale are rated on a five-point Likert scale ranging from 1 to 5 (1 = never, 2 = rarely, 3 = sometimes, 4 = often and 5 = always). The scores of negative direction statements were reversed before computing the total score of nurses' colleague solidarity.

Scoring system:

The total score of nurses' colleague solidarity ranged from (1-115) and was classified into three levels based on cut of point as good >75 % (scored from 1-57), fair

50-75% (scored from 58-86) and poor <50% (scored from 86-115).

Tool (II) Nurses Job Motivation Scale (NJMS)

It was created by **Engin and Çam, (2016)** to evaluate job motivation of staff nurses. It includes (27) items categorize into two sections: Intrinsic motivation (11 items) and extrinsic motivation (16 items)

The items of the scale are rated on a three-point Likert scale ranging from 1–3 (1 = disagree, 2 = somewhat agree and 3=agree).

Scoring system:

The total score of nurses' job motivation tool ranged from (1-81) and was categorized into three levels based on **Mahmoud, (2008)** as low-level < 50 % (scored from 1-40), moderate level 50-75% (scored from 41-60) and high-level > 75 % (scored from 61-81).

3.5 Validity:

The data collection tools were translated into Arabic and back into English to ensure accuracy and clarity. Face and content validity by a panel of five expertise from different faculties of nursing three from Mansoura University and two from Port Said University who revised the tools for relevancy, clarity, applicability, comprehensiveness, understanding, and simplicity for use and according to their opinion's modifications were made. The modifications were related to rephrasing of some sentences.

3.6 Reliability:

The study tools were tested for its reliability by using Cranach's Alpha test, for two tools, Colleague Solidarity Scale for Nurses (CSSN) and Job Motivation Scale (NJMS) which were (0.92) and (0.93) respectively.

3.7 Pilot study:

A pilot study was carried out on 35 staff nurses that stands for (10%) from the total study participants(350) for testing the clarity, feasibility and applicability of the questions, identifying barriers and problems that may be encounter during collecting data and for determining the time required to answer questions and appropriate changes were made based on their comments. The pilot study's

staff nurses were not included in the overall number of participants.

3.8 Fieldwork:

The actual fieldwork was started at the beginning of July 2021 and completed by the end of September 2021. The researcher meeting staff nurses in different three shifts morning, afternoon and night every day, and distributing questionnaire to each participant in the study at the end of shift. The study's purpose and how to complete tools were explained by the researcher. The researcher giving each staff nurse her copy to fill it and handed it back to researcher. Give 10-15 minutes to fill the questionnaire sheet. To ensure that all questions were addressed, the staff nurses completed the questionnaire sheet while the researcher was present.

3.9 Ethical consideration:

Ethical approval was gained from the research ethics committee of the Faculty of Nursing – Mansoura University. Official approval had been received from the hospital's in charge administrator before starting the study. The privacy and confidentiality of the obtained data were ensured. The staff nurses were informed that the tool's content would only be utilized for study purposes. Participants were informed that their participation in the study was completely voluntary and that they had the freedom to end it at any time without responsibility.

3.10 Statistical analysis:

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 25, SPSS Inc. Chicago, IL, USA). The normality assumption was accepted. Therefore categorical variables were represented as frequency and percentage. Continuous variables were represented as mean, and standard deviation. Independent t-test was used to test the difference between two mean of continuous variables. ANOVA-test was used to test the difference between more than two means of continuous variables. Chi-square test was conducted to test the association between two categorical variables. Pearson correlation coefficient test was

conducted to test the association between two continuous variables. Simple linear regression was performed to explore independent variable (Colleagues solidarity) of job motivation (dependent variable). Statistically significant was considered as (p-value <0.01 & 0.05).

4. Results

Table (1): Demonstrates personal and job characteristics of studied staff nurses. According to the table, most of staff nurses (74.9%) were in age group 20-30 years old with mean score (27.63±4.52), more than two thirds of them (81.9%) were female, the majority of them (68.3%) were married, and (61.6%) had technical degree of education. In concerning years of experience approximately half of them (49.2%) had 1 to5 years of experience with mean score (7.56±5.39). Most of them were worked on long day shift (54.3%) with majority of them (60.3%) working in inpatient units.

Figure (1): Shows perception of studied staff nurses about colleagues solidarity. According to this figure, the high percent of studied staff nurses (41.3%) were always perceived total colleagues solidarity while (4.4%) of them were never. High percent of staff nurses (54.3%, 37.8% & 32.1%) were always perceived emotional solidarity, academic solidarity and negative opinion about solidarity respectively. While low percent of staff nurses (1.0%, 2.2% & 10.2 %) were never perceived emotional solidarity, academic solidarity and negative opinion about solidarity respectively.

Figure (2): Illustrates mean percentages of studied staff nurses' colleagues solidarity subscales. Academic solidarity was the highest mean percent (89.02%) followed by emotional solidarity (86.76 %) while negative opinions about solidarity ® subscale was the lowest mean percent (69.80 %).

Figure (3): Shows perception of studied staff nurses about job motivation. According to this figure the high percent of studied staff nurses (51.1%) were agree toward total job motivation while (8.9%) was disagree. High percent of staff nurses (57.1% & 45.4%) were agreed toward extrinsic and intrinsic motivation respectively. While low percent of staff nurses (6.3% & 11.4%) were disagree toward extrinsic and intrinsic motivation respectively.

Figure (4): Illustrates mean percentages of studied staff job motivation subscales. Extrinsic motivation subscale was the highest mean percentages (83.58 %), while intrinsic motivation subscale was the lowest mean percentages (78.09 %).

Table (2): Shows correlation between colleagues solidarity subscales and job motivation subscales of the studied staff nurses. According to the table there was highly statistically significant positive correlation between emotional and academic solidarity subscales with all job motivation subscales. Also, statistically significant positive correlation were found between opinions about solidarity with extrinsic and total job motivation. Also, there was highly statistically significant positive correlation between total colleagues solidarity with intrinsic, extrinsic and total job motivation.**Figure (5):** Demonstrates correlation between total colleagues solidarity and total job motivation of studied staff nurses. It shows that there was highly statistically significant positive correlation between total colleagues solidarity and job motivation as perceived by studied staff nurses.

Table (3): Demonstrates the influence of colleagues solidarity on job motivation as reported by studied staff nurses. This table views that colleagues solidarity influence job motivation as perceived by studied staff nurses.

Table (1): Personal and job characteristics of the studied staff nurses (n=315)

Personal characteristics	No.	%
Age		
▪ 20-30 years	236	74.9
▪ 31-40 years	75	23.8
▪ >40 years	4	1.3
Mean±SD	27.63±4.52	
Gender		
▪ Male	57	18.1
▪ Female	258	81.9
Marital status		
▪ Single	89	28.3
▪ Married	215	68.3
▪ Divorced	2	0.6
▪ Widowed	9	2.9
Level of education		
▪ Diploma degree	64	20.3
▪ Technical degree	194	61.6
▪ Bachelor degree	57	18.1
Experience		
▪ 1-5 years	155	49.2
▪ 6-10 years	79	25.1
▪ > 10 years	81	25.7
Mean±SD	7.56±5.39	
Working shift		
▪ Morning shift	119	37.8
▪ Long day shift	171	54.3
▪ Night shift	25	7.9
Working units		
▪ Inpatient units	190	60.3
▪ Outpatient units	55	17.5
▪ Intensive care units	47	14.9
▪ Operating units	23	7.3

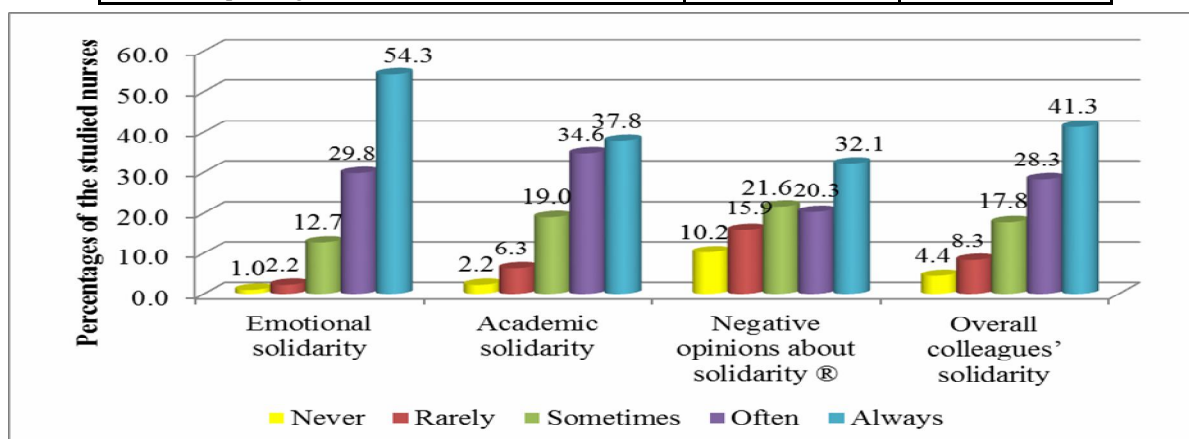


Figure (1) Perception of studied staff nurses about colleagues' solidarity (n=315).

® Reversed score

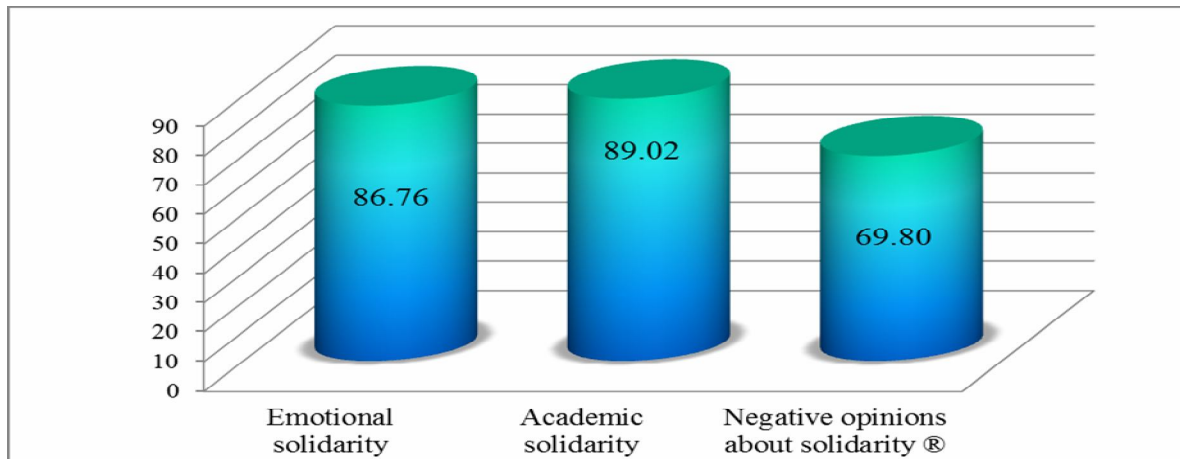


Figure (2): Mean percentages of studied staff nurses' colleagues solidarity subscales (n=315).

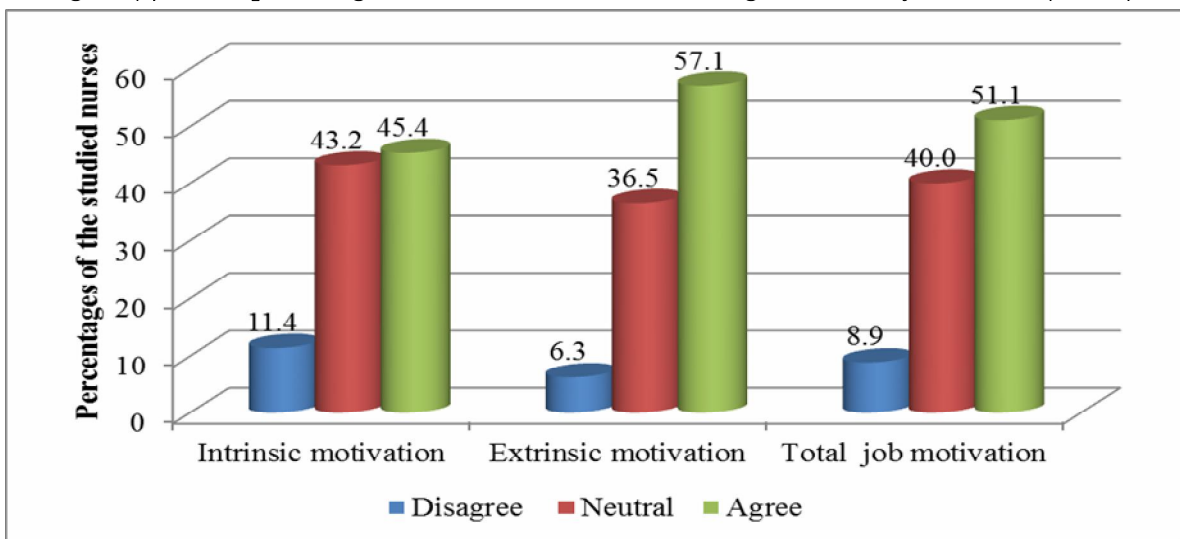


Figure (3): Perception of studied staff nurses about job motivation (n=315)

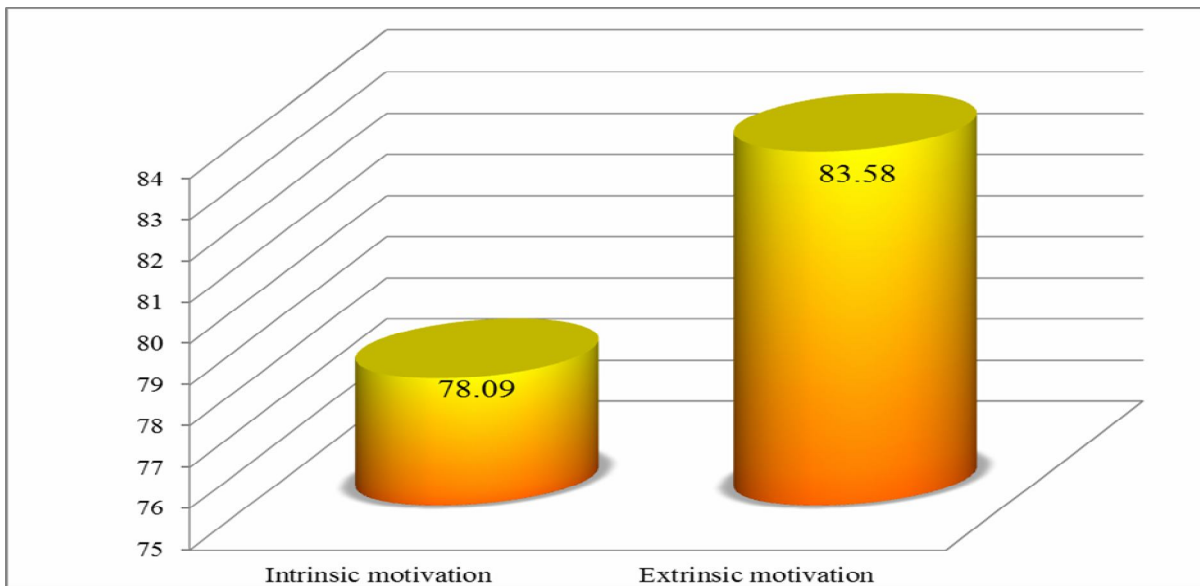


Figure (4): Mean percentages of studied staff job motivation subscales (n=315)

Table (2): Correlation between colleagues solidarity subscales and job motivation subscales of the studied staff nurses (n=315)

Colleagues solidarity subscales	Job motivation subscales					
	Intrinsic job motivation		Extrinsic job motivation		Total job motivation	
	r	p	r	p	r	p
Emotional solidarity	0.38	0.000**	0.49	0.000**	0.48	0.000**
Academic solidarity	0.37	0.000**	0.42	0.000**	0.44	0.000**
Negative opinions about solidarity®	0.03	0.62	0.23	0.000**	0.13	0.02*
Total colleagues solidarity	0.32	0.000**	0.52	0.000**	0.47	0.000**

* Statistically significant (p<0.05) / ** Highly statistically significant (p <0.01)

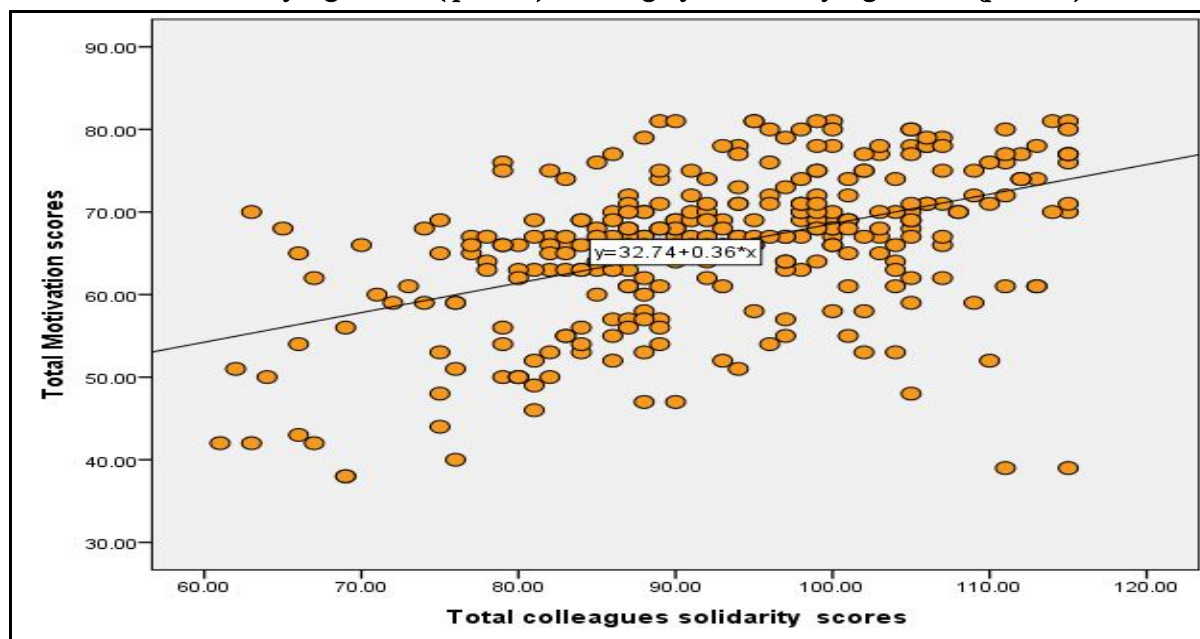


Figure (5): Correlation between total colleagues solidarity and total job motivation of studied staff nurses (n=315)

Table (3): Influence of colleagues solidarity on job motivation as perceived by studied staff nurses (n=315)

Job motivation					
	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
Colleagues solidarity	0.36	0.04	0.48	9.55	0.000**

** Highly statistically significant (p ≤0.01)

5. Discussion

Colleagues solidarity among nurses is crucial to preserving healthy organisational productivity and fosters collaboration with patients, managers, supervisors, and other nurses. It serves as a source of job motivation. As well as, highly motivated nurses play a vital role in providing effective and standard health care that enhance patients' experience of health services. Increasing interest in nurses' job motivation result in a worldwide

attention on various methods to improve their motivation (Göktepe, et al., 2020).

Regarding to colleagues solidarity, the current study finding indicated that high percent of studied staff nurses were always agree toward total colleagues solidarity and emotional solidarity. This may be due to the nature of their work, the dangerous of cancer disease and its treatment and they are exposed to many loss of their patients. So, they need to support and help each other. Also, they care about establishing friendly relationship with

their colleagues and respect their personalities. As well as, they reported that they feel a spiritual relief when listening to each other's concerns about patient care, helping each other with difficult problems and guiding their new colleagues that resulted in solidarity among nurses.

These results are matched with **GUL, (2019)** who carried out a study about colleague solidarity and job stress in nurses, reported agreement and high score to the total colleague solidarity among nurses. As well as, emotional solidarity has a higher scores because it help nurses to decrease their job stress while negative opinions about colleagues solidarity were the lowest. As well, a study conducted in Iran by **Sodeify& Habibpour, (2020)** who examined nurses' perceptions of co-worker support in the workplace and concluded that nurses perceived their colleagues' support positively at the work and this includes cooperation, emotional support, good working relationship, adequate social relationships, guidance and learning. Moreover, nurses have a belief that perceiving support from colleagues improve the quality of care and promote ability to handle stressful issues in nursing.

Likewise, **Kilic&Altuntas, (2019)** who examined the impact of collegial solidarity among nurses on the climate of the organization indicated that nurses perceive collegial solidarity among themselves with a high scores, emotional solidarity was the highest and negative thoughts related to solidarity are the lowest.

However this finding are in contrast with **Baykal & Altuntas, (2014)**, who examined factors associated with performance levels and occupational-personal characteristics of graduated nurses not supported the present study and stated that studied nurses believe they are strong in terms of their professional standards and aspirations but lacking in terms of communication, interpersonal relationships, and emotional support.

Regarding to colleagues solidarity subscales as perceived by staff nurses. The current study revealed that academic solidarity

subscale was the highest mean percent. This may be attributed to cooperation and mutual exchange of information among nurses as they share their experiences, skills and knowledge. Also, in addition to management at Oncology Center Mansoura University, nurses encourage each other for continues training, participation in workshops, conferences and many scientific research.

This findings agree with a research conducted in Turkey by **Uslusoy & Gürdoğan, (2019)** who examined empathic tendency with nurses does it affect colleague solidarity. They indicated that the higher mean percent of nurses were in the academic solidarity sub-dimension especially postgraduate ones and explained that may be due to the fact that they are more engaged in academic activities during their education and they are aware that sharing their knowledge with other colleagues will increase their professional development. Likewise, a study conducted in Japan by **Noguchi, Yamamoto & Takai, (2016)** who examined how does collegial support increase retention of registered nurses (RNs') in homecare nursing facilities support the present study and reported that RNs' claimed that their colleagues shielded them from the possibility of making mistakes, providing them with their experiences and information and continuously assist them to improve their competence level, academic and professional development.

On other hand, a study conducted in china by **Liu, Gao & Liu, (2014)** who examined the effect of personal and organizational factors on nurses' colleague solidarity doesn't support the present study, and asserted that academic solidarity among staff nurses was low mean percent due to the extensive clinical nursing work and the nurses lacked of scientific research consciousness thus, advancement of nursing research was very decreased.

Regarding to job motivation, the current study demonstrated that the high percent of staff nurses were agree toward total job motivation. This may be attributed to the healthy work environment at Oncology Center Mansoura University where nurses feel autonomy and mastery in their work as most of

them reported that they are very adept and competent while working, they take responsibility of their decisions and their job tasks align with their beliefs which motivate them to do better work. Furthermore, they feel that their work is important for them, which provides them respectability in society and purpose for life. Also, presence of effective and supportive relationships among nurses and supportive supervisors in their work units.

This result is consistent with **Gagné, Forest, Gilbert, Aubé, Morin & et al., (2010)** who investigated the motivation at work scale: validation evidence in two languages. They indicated that most of hospital nurses seemed to be motivated to their work. This may be attributed to the majority of nurses expressing optimism, perceptions of organizational support, and feelings of independence, competence, and relationships with others. In addition to **Dagne, Beyene, & Berhanu, (2015)** in their study about motivation and factors influencing it between health care professionals in the public hospitals, Central Ethiopia, support present study, they stated that health professionals which the majority of them were nurses have general agreement toward job motivation.

On the other side, **Deressa & Zeru, (2019)** who examined job motivation and its impact on organizational performance: the case of nurses in Hawassa private and public hospitals, Ethiopia not support present study. They indicated that the majority of nurses were not or less motivated and explained the lack of job motivation practices by the public organization in developing nations might be the cause behind these situations.

Regarding to job motivation subscales, the present study results revealed that extrinsic motivation subscale had the highest mean percentage while intrinsic motivation subscale was the lowest mean percentages. This might be because of staff nurses are motivated by working condition, positive relationships with their colleague and benefits of their job as they reported that their job provides them a place in life and is beneficial for patients, as well as, when they do their job well they feel successful. They take responsibilities of their

decisions and can use their skills in work that motivate them to do more effort. Also, they reported their colleagues' getting on well with each other which enables them to do a better job plus approximately majority of them appreciate the type of management in their working unit.

This result is in harmony with a study conducted in Egypt by **Mahmoud, Elhosany & Helal, (2020)**, who examined the relation between psychological wellbeing and job motivation among staff nurses in governmental hospitals in Port Said city, agree with present study, they revealed that the majority of nurses reported highly mean percentages for extrinsic motivation and explained this may be due most of nurses are highly autonomous in their decision making and environmental mastery, positive relation with others and purpose in life. Another study conducted in India by **Pandey, Goel & Koushal, (2018)**, who assessed the motivation levels and associated factors among the nursing staff of tertiary-level government hospitals, supported present study. They indicated that motivation mean score of the nursing staff was higher for extrinsic motivational attributes as compared with intrinsic attributes.

However, this result was contradicted with a cross-sectional study conducted in KSA by **Baljoon, Banjar & Banakhar, (2019)**, who examined factors influencing nurses' job motivation level at a governmental hospital, determined that the mean percentage for extrinsic motivation was lower than intrinsic motivation. Furthermore a study conducted by **Bansal & Malhotra, (2016)** who investigated motivational levels among persons working in a Government Teaching Hospital of Punjab not support present study, they affirmed that nurses have a low mean scores of extrinsic motivation and explained this related to the notion that public sector institutions cannot offer external rewards.

Regarding correlation between study variables, the finding of current study revealed that there was highly statistically significant positive correlation between colleague solidarity and job motivation as perceived by

studied staff nurses at Oncology Center Mansoura University. This may be attributed to the supportive atmosphere among nurses they help each other, cooperate in solving problems especially difficult ones and making decisions and share knowledge, skills and experiences that increase their competences and make them feel sincerity and solidarity and enhance their job motivation.

Moreover, colleagues solidarity among nurses at Oncology Center - Mansoura University showed importance especially during covid -19 crisis in which nurses support and cooperated with each other to overcome this crisis and how to maintain motivated to care their patient who have low immunity and have more risk to covid-19. Thus, nurses who work in harmony and solidarity with the support they receive from their colleagues have higher job motivation.

The result agree with a study conducted in Turkey by (Göktepe, et al., 2020) who examined the relation between nurses' work-related variables, colleague solidarity and job motivation. They found that there is statistically significant positive correlation between colleague solidarity and job motivation among nurses. Moreover, they asserted that colleague solidarity could be included among the psychosocial elements within motivational factors since it helps nurses in developing strong interaction with one another, trusting each other, feeling welcomed, learning from others and to grow personally and professionally. Similarly, a cross sectional study conducted in Malaysia by Nasurdin, Cheng & Khan, (2020), about the effect of social support on nurses' job motivation who support present study, they affirmed that perceived peer support has a positive significant correlation with nurses' job motivation. When nurses feel support from their colleagues, their motivational level will rise this is because, when necessary, nurses receive help from their colleagues with work chores. by exchange experiences and skills with their colleagues, and giving them support and encouragement that enhance their job motivation.

Likewise, a study conducted in Sweden by Gyllensten, Wentz, Håkansson, Hagberg & Nilsson, (2019), in their study about older assistant nurses' motivation for a full or extended working life who support the present study and they indicated that perceived colleagues support has positive relation with nurses' job motivation. They explained that may be attributed to technical and psychosocial support from their colleagues at workplace is incredibly important since it promotes work completion, strengthens nurses' feeling of belonging, which, leads to increase job motivation of them.

On the other side, a research conducted in Sahlgrenska University Hospital, Gothenburg, Sweden by Erestand, Haglind, Bock, Andersson & Angenete (2017), who investigated the changes in safety climate and teamwork in the operating room after application of a revised WHO checklist, disagree with the present study. They reported that nurses were no significant relation between teamwork, solidarity climate and job motivation and satisfaction due to inadequate interaction, communication and coordination between surgeons and scrub nurses.

6. Conclusion

Depending on the study results, it was concluded that colleagues solidarity always present among staff nurses at oncology center -Mansoura university. Also, most of them were agreed toward job motivation. Additionally, there was highly statistically significant positive correlation between colleagues solidarity and job motivation. Increase colleagues solidarity among staff nurses improve their job motivation.

7. Recommendation

Implication for the management:

- ❖ Adopting techniques to enhance the colleagues solidarity among nurses by fostering a positive work place and designing continuing education courses and programs for staff nurses about the importance of colleague solidarity.
- ❖ Providing open channels of communication and trustful relationships

among nurses and their supervisors to provide them with constructive feedback and needed support.

- ❖ Establishing and participating in social and scientific activities such as more workshops, conferences, camps and fun day for health team.
- ❖ Implementing strategies like professional development programs and incentive system for both intrinsic and extrinsic motivation to maintain nurses motivated.
- ❖ Show recognition and appreciation for nurses' work and effort, empower them, provide rewards, awards and benefits and support them especially in difficult situation.

Implication for nurses:

- ❖ Participating nurses in continuous educational programs to increase their knowledge and skills that increase nurses abilities ,self - confidence and enhance their intrinsic motivation
- ❖ Improving a cooperative relationship between nurses to share their experiences and feelings with their colleagues that help them to cope with difficult situation.
- ❖ Encouraging nurses mutual help, mutual support, sharing knowledge and skills, cooperation in decision making process and solving problems.

Further study

- ❖ There is a need for further studies and research about the impact of colleague solidarity on job performance, professional development and ethical climate.

8. Acknowledgement

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