Impact of Palliative Care on Reliving Symptoms among Gynaecologic Cancer Patients

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Abstract

Early palliative care involvement provides a comprehensive approach that enhances patient outcomes, particularly in symptom control, quality of life, and family satisfaction.**Aim of the study** was to evaluate the impact of palliative care on reliving symptoms among gynaecologic cancer patients managed at Women's Health Hospital. **Subjects and methods:** A quasi-experimental research study (pre-posttest) was carried out involving 70 women diagnosed with gynecological cancer, taking place in the inpatient gynecological oncology unit at Women Health Hospital, Assiut University**,** two tools were utilized: a structured interview questionnaire and the EORTC-C30 questionnaire, comprising 30 items to assess health-related quality of life (Global health status / QoL), functioning scale (roles ,physical, emotional, cognitive, and social), and a symptoms scale. **Results:** Illustrate significant decrease in score of symptoms burden as fatigue, pain, dyspnoea, insomnia, loss of appetite, constipation**,** P value significant at < 0.005 at the four time points. A significant decrease in score of symptoms' scale lead to better health related QoL during the follow up. **Conclusion:** Integration of palliative care has a positive impact on improvement symptoms among gynecological cancer patient. **Recommendations**: provide the palliative care for all gynecologic cancer patients from the start of diagnosis.

Keywords: Gynecological Cancer, Palliative Care & Relieving Symptoms.

Introduction

Palliative care is described by the World Health Organization (WHO) as a strategy that enhances the quality of life for patients (both adults and children) and their families dealing with issues related to life-threatening illnesses. It alleviates and prevents suffering by early detection, accurate evaluation, and treatment of pain and various issues, be they physical, psychosocial, or spiritual **(Silva Reis et al., 2025).**

Women with gynaecologic cancers frequently experience substantial challenges due to various symptom burdens during their illness. Patients may experience physical, psychological, emotional, and spiritual suffering, adversely affecting their quality of life their quality of life. Palliative care presents a comprehensive strategy for patient treatment and can be utilized in conjunction with both curative and palliative cancer therapies.Alongside standard management strategies for typical symptoms and illnesses **(Persenaire et al., (2023)**

Patients with gynecologic cancer across to different line of receiving treatment; surgery, chemotherapy, and/or radiation so they often face many difficult issues as physical, psychological symptoms and poor prognosis in the course of their diseases. Difficult issues interfere with compliance of treatment and can adversely affect the quality of life for women and their families **(Vetter., 2022).** Thus, there should be a heightened focus on palliative care, which offers a comprehensive approach for women with gynecological cancer **(Mohamed et al., 2024).**

Palliative care interventions have been shown to effectively alleviate physical symptoms frequently experienced by patients with gynecologic cancer. Pain management strategies, fatigue-reducing techniques, and nausea control measures are integral components of palliative care that contribute to improving the overall health status of these patients. Furthermore, the psychosocial support provided through palliative care services can address psychological distress and enhance emotional well-being among patients **(Zhang et al., 2023).**

Palliative care nurses collaborate with patients and families encountering a life-threatening illness as part of an interdisciplinary team, frequently coordinating care in consultation with clients, their caregivers, and other team members**.** Consequently, palliative nursing is a specialized area of nursing that keeps evolving alongside the art and science of nursing and palliative care **(Sułkowska et al., 2024).**

Significance of the study:

Gynecological cancers represent a significant public health issue and a major contributor to cancer-related deaths, especially in developing nations. The projected yearly incidence surpasses 3.6 million, with

mortality rates exceeding 1.3 million **(Piechocki et al., 2022)**

The total count of women diagnosed with gynecologic cancer continues to increase **(Sayed et al., 2021)**.The mortality rate of gynecological cancer from all types of cancer in Egypt is 3.49%; ovarian cancer is the most common type (2.1 %) followed by corpus uteri (0.39%), cervix uteri (0.84 %), vulva(0.12 %), and vagina (0.04 %)**(Sung, 2021).**

The integration of palliative care into routine gynecologic cancer treatment is associated with cost savings, enhanced survival rates, diminished symptom burden, and a better quality of life for both patients and caregivers **(Lindemann et al., 2020)**. The numbers of research which evaluate the impact palliative care on women with gynecologic cancer patients were few that prompting the researcher to conduct this study.

Aim of the study:
To evaluate the impact of palliative care on reliving symptoms for gynecologic cancer patients.

Research hypothesis:
Implementation of palliative care are expected to be relived the symptoms among gynecologic cancer patients.

Subjects and Method:
Technical design:
Study design: this study applied a quasi-experimental research (pre-posttest) for its design.

Setting: This took place at inpatients' gynecology oncology′s unit at Women's Health Hospital, Assiut University. Oncology unit found is located on the fifth floor and includes five rooms; examinations room, a pre-operative room, a postoperative room, the director's room and a nursing room .This unit provides an comprehensive approach to diagnosing and surgically managing both cancerous and noncancerous (benign) conditions of the female reproductive system.

Sample size:
The sample size was calculated by using G*power software version 3.1.9.7 based on an expert opinion by **Cohen effect size** 0.5. The total sample size was 69 patients with gynecological cancer with **Power** (1-β err prob) 0.8 and **α err prob** 0.05 and raised to 70 women .

Inclusion criteria:
- Patient diagnosed with gynecologic cancer.
- Patient's age is over18 years.
- Patient is capable of effectively communicating with others.
- Patient agrees to participate in the study.

Exclusion criteria:
- Patient with acute pain (immediate postoperative).

Tools:
The researcher used two tools in this study to gather data

Tool (I): Structured interview questionnaire that compromised the following:
- **Demographic data as:** name, age, educational levels, occupation, address, marital status and phone number.
- **Medical history for any illness:** such as hypertension, diabetes mellitus, cardiac disease, anemia and any other medical comorbidity.
- **Family history of cancer:** present or not and what type**.**
- **Obstetrical history:** No. of gravidity, No. of parity and No. of abortion
- **Gynecological history:** conditions as polycystic ovary, uterine fibroid etc…..
- **Current patient cancer data:** type of cancer, stage, admission status, degree of cancer, time since diagnosis and type of treatment received.
- **Therapeutic status:** At diagnostic phase, in treatment, less than 5 yrs. treatment, equal /more than 5 yrs. treatment.
- **Reason for palliative care referral**: managing pain, providing psychotherapy, administrating physiotherapy, and controlling symptoms.
- **Survival overall**: alive or dead.

Tool (II): (EORTC-C30 questionnaire) (Aaronson et al., 1993):
This tool was created by Aaronson et al., (1993) and aims to assess the health-related quality of life (Global health status / QoL), a Functioning scale(physical, role, emotional, cognitive and social) ,Symptoms (fatigue ,nausea and vomiting, pain, dyspnoea, insomnia**,** appetite loss,constipation ,diarrhoea and financial difficulties**)** The questionnaire consists of 30 items ,the first 28 items are scored on a 4-point likert scale in terms of sufficiency from 1 (not at all) to 4 (too much). The final two items, evaluating the participant's health realted QoL and overall health status, are rated on a 7-point Likert scale from 1 (very bad) to 7 (excellent).

Scoring system
All scales of measurement have scores that range in score from 0 to 100 after applying linear transformation as stipulated by The European Organisation for Research and Treatment of Cancer (EORTC).

Linear transformation
Symptom scales / items: $S = \{(RS - 1) \text{ range}\} \times 100$

Range is the difference between the maximum possible value of RS (Row score) and the minimum possible value.

Operational design:

It was presented in two stages pilot study and field work.

Pilot study

The pilot study carried out in May, 2023 aimed to evaluate the feasibility and application of the tools and estimate the time required for complete women's data. It was conducted on 10 patients.following the pilot study , no changes were made to the tools and thus the pilot study sample was included in the total sample.

Filed work:

The data gathering started from first of May, 2023 and will continue until the end of April, 2024 (12month).This was carried out in three phases, pre intervention, intervention and post intervention phase.

Ethical Considerations:

- Ethical Committee in the faculty of nursing approved the Research proposal with code 1120230611.
- There was no risk for study participants during application of the research.
- The research adhered to standard ethical guidelines in clinical studies.
- Written consent was secured from patients or guidance who took part in the study, following an explanation of the study's nature and objectives.
- Confidentiality and anonymity provided.
- The study participant had the right to refuse to take part or exit the study at any time without providing any justification.
- The privacy of study participants was taken into account while gathering data.

Pre intervention phase:

All patients diagnosed with gynecologic cancer at the women's Health Hospital, oncology unit were interviewed in their rooms by the researcher, who explained study's nature. Patients were informed that participation in the study was entirely voluntary, and the researcher obtained their informed consent to be involved in the study and provide an explanation of the study while providing an explanation of the study's purpose, the application of results, and the anonymity of the tools used (ensuring confidentiality).

Intervention phase:

To gather essential data from every patient interviewed for duration of 15-25 minutes. Over 65% of patients had the EORTC-QLQ-30 questionnaire read to them and their families due to illiteracy, after which they marked their responses to evaluate the presence of any symptoms /problem /issue ,leading to referrals to specialists as needed .

Referral:

After determining the symptom/ problem, the researcher and physician was referred the patients to specialist (for symptoms control, pain management, psychotherapy and physiotherapy) after consultation with the on-duty physician.

Follow up:

The researchers conducted follow-up evaluations on all patients after 2, 4, and 6 months following referral. If a patient was admitted to the oncology unit, the researcher met with there directly; otherwise, follow-up was conducted through phone calls by using the EORTC-QLQ-30 questionnaire as a post-test measure.

Administrative design:

This study was conducted with the endorsement of the nursing faculty's Ethical committee, Assiut University and the faculty dean, formal approval was obtained from the director of Woman Health Hospital, written consent was obtained from every woman participating in the study, ensuring confidentiality. The woman was allowed to exit the study at any stage.

Statistical design

The researcher verified, coded, and analyzed the data using IBM-SPSS 24.0 (IBM-SPSS Inc., Chicago, IL, USA) *. Descriptive statistics: Means, standard deviations, medians, ranges, frequencies, and percentages were computed. The Shapiro-Wilk / Kolmogorov Smirnoff test was utilized to assess the normality of continuous variables. For continuous variables with more than two categories, a repeated measure ANOVA (RM-ANOVA) was conducted to evaluate the mean differences in data that followed a normal distribution and had repeated measures. A post-hoc test was performed using Bonferroni corrections for pairwise comparisons between the two study groups. A significant p value was regarded when it is less than 0.05.

Results:

Table (1): Distribution of the studied women according to their demographic characteristics

Variable	Category	n = 70
Age/years	Mean ± SD	51.83 ± 14.6.3
	Median (Range)	51 (22 – 78)
Age Groups	20 - 39 years	14 (20%)
	40 – 60 years	36 (51.4%)
	> 60 years	20 (28.6%)
Occupation	Housewife	67 (95.7%)
	Employ	3 (4.3%)
Residence	Urban	3 (4.3%)
	Rural	67 (95.7%)
Educational Level	Illiterate	47 (67.1%)
	Read/Write	9 (12.9%)
	Primary/Elementary	10 (14.3%)
	Secondary	3 (4.3%)
	University	1 (1.4%)
Marital Status	Single	14 (20%)
	Married	33 (47.1%)
	Divorced	6 (8.6%)
	Widow	17 (24.3%)

Table (2): Distribution of the studied women according to their current cancer data

| Variable	Category	n = 70
Cancer Type	Uterine	24 (34.3%)
	Ovarian	33 (47.1%)
	Vaginal	1 (2.9%)
	Cervical	10(14.3%)
	Valvular	2 (2.9%)
Stage	Stage-I	24 (34.3%)
	Stage-II	23 (23.9%)
	Stage-III	13 (18.6%)
	Stage-IV	10 (14.3%)
Treatment Type	**Active**	
	Surgery	38 (54.3%)
	Chemotherapy	17 (24.3%)
	Radiotherapy	8 (11.4%)
	Curative	
	Follow-up	7 (10%)
Therapeutic Status	At Diagnosis	9 (12.9%)
	In Treatment	38 (54.3%)
	< 5 years post-TTT	20 (28.6%)
	≥ 5 years post-TTT	3 (4.3%)

more than one
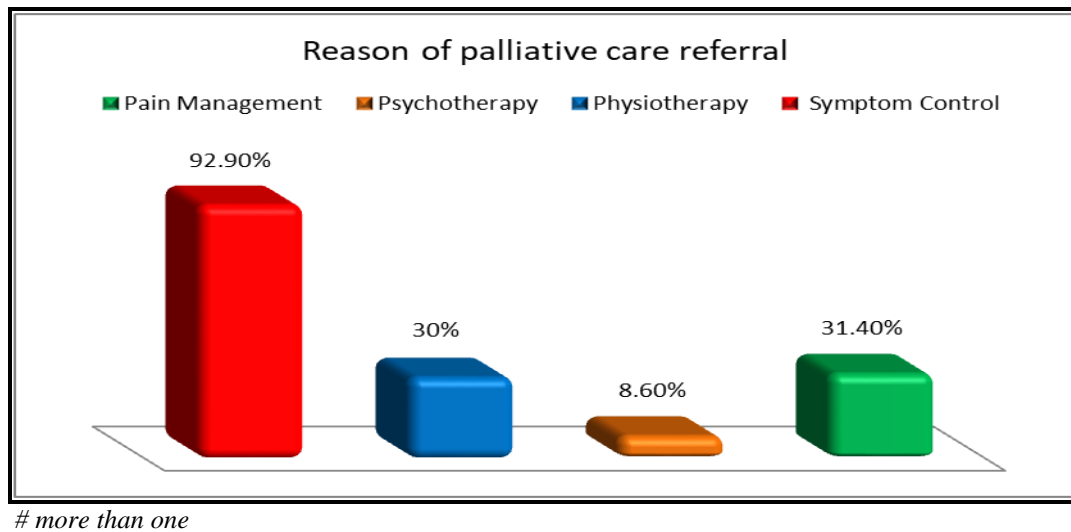
Figure (1): *Reason of palliative care referral*
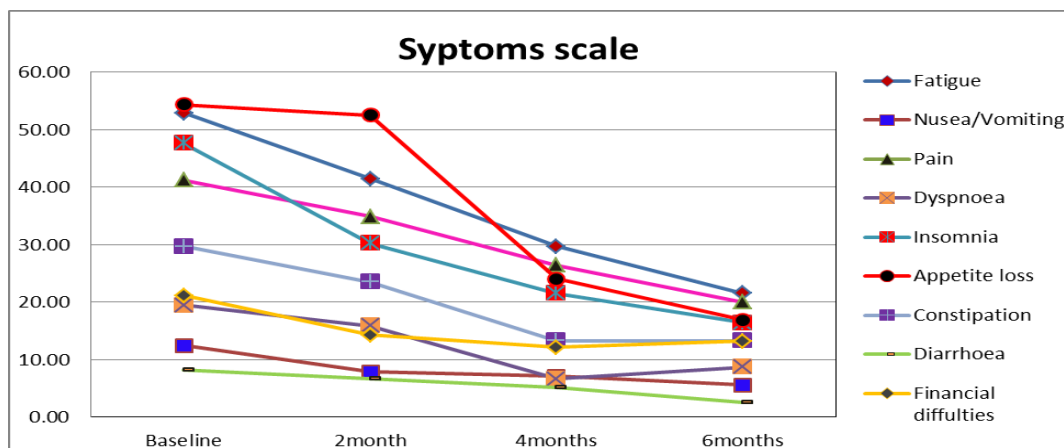
Repeated Measure ANOVA test was used to compare the mean difference between groups over time

Figure (2): Impact of Integrated Palliative Care on Symptom/Scale Item of EORTC-30

Table (3): Correlation between patient's symptoms subscale and demographic characteristics

Symptoms subscale				
	Baseline	**2 months**	**4 months**	**6 months**
Age Groups				
20 - 39 years	28.7 ± 16.6	26.5± 15.2	9.7± 13.6	6.2 ± 11.8
40 – 60 years	31.2 ± 16.1	21.0 ± 16.1	14.6 ± 16.2	9.6 ± 12.5
> 60 years	37.3 ± 15.0	30.7 ± 16.5	26.1 ± 15.6	20.7 ± 23.7
P-value*	0.342			
Occupation				
Housewife	32.0±16.1	25.1±16.4	17.4±16.6	12.5±17.4
Working	41.7±11.0	20.5±17.8	4.9±8.5	3.7±6.4
P-value*	0 .155			
Educational Level				
Illiterate	34.0±16.8	26.0±17.3	20.1±17.1	14.3±18.6
Read/Write	30.4±11.5	26.0±11.1	8.9±8.8	4.4±6.5
Primary/Elementary	23.1±13.9	15.5±15.3	13.8±16.7	12.1±16.2
Secondary	45.2±4.9	34.1±5.7	0.0±0.0	0.0±0.0
P-value*	0.009			

| Symptoms subscale | | | |
	Baseline	2 months	4 months	6 months
Marital Status				
Single	29.8 ± 14.2	23.1±14.4	9.0± 7.5	9.5± 11.9
Married	30.1±17.1	24.8±17.3	17.6±17.3	10.9±13.9
Divorced	41.2±16.0	17.3±10.5	11.9±18.4	5.7±8.9
Widow	36.0±14.6	29.0±17.7	23.9±17.7	18.7±25.8
P-value*	0.270			

Table (4): Correlation between patient's symptoms subscale and cancer data.

| Symptoms subscale | | | |
	Baseline	2 months	4 months	6 months
Cancer type				
Uterine	32.8±16.3	26.7±18.6	20.4±17.0	17.6±21.4
Ovarian	32.7±16.5	23.7±14.1	13.5±16.0	7.0±11.1
Cervical	26.3±14.3	22.8±16.4	22.2±17.5	18.4±19.3
Valvular	46.5±1.4	30.4±26.3	9.0±7.8	0.8±0.7
P-value*	0.012			
Stage of cancer				
Stage-I	24.7±15.6	18.0±14.8	8.0±11.8	5.4±9.9
Stage-II	30.0±15.4	21.2±16.0	15.3±13.5	11.3±13.4
Stage-III	44.2±12.1	35.0±14.3	25.4±12.4	18.6±24.4
Stage-IV	41.2±10.0	36.6±11.6	31.1±23.3	21.5±21.9
P-value*	0.912			
Treatment type				
Surgery	30.2±14.8	23.7±15.2	15.2±14.8	10.1±13.9
Chemotherapy	33.9±20.4	23.1±19.0	21.6±18.9	18.1±21.9
Radiotherapy	40.5±11.3	35.1±13.6	25.0±20.5	17.7±22.5
Follow-up	32.1±14.7	24.0±17.9	5.8±6.7	2.0±4.3
P-value*	0.392			
Therapeutic status				
At Diagnosis	26.1±16.5	22.9±15.1	12.0±13.8	5.0±8.6
In Treatment	32.0±15.2	22.0±16.4	18.0±17.6	10.5±15.4
< 5 years post-TTT	34.5±17.8	28.3±16.2	18.3±16.6	20.0±21.3
≥ 5 years post-TTT	43.6±3.5	44.0±2.8	9.0±7.8	0.8±0.7
P-value*	0.027			

Table (1): Demonstrates the demographic characteristics of the studied women, showed that 51.4% of them their age ranged between 40-60yrs. with a mean age of 51.83 ± 14.6.3 also, 95.7% of them were housewives. Regarding their residence 95.7% were from rural areas. According to their educational level, 67.1% were illiterates and about 47.1% of them were married.

Table (2): Clarifies the current cancer data it illustrated that the most common type cancer that women were suffer from was ovarian cancer 47.1% ,34.3%   of them were in stage I, 54.3% under treatment and 54.3% treated with surgery.

Figure (1): The figure Illustrate patients need of Symptoms' Control (92.9%) and Pain Management (31.4%).

Figure (2): The figure illustrate significant difference was found decrease in score of symptoms burden as fatigue , Pain, dyspnoea, insomnia appetite loss,constipation, $P < 0.001$, $P=0.001$ $p=0.021$, < 0.001 $P < 0.001$, $P < 0.005$ at the four time points respectively. No significant difference was found increase in mean score of nausea/vomiting, diarrhoea and financial difficulties , $P < 0.106$, $P = 0.216$, $P = 0.157$ respectively.

Table (3): showed that there is statistically positive correlation between patients symptoms subscale and educational level ($p =0.009$), However, there was no statistically significant correlation between patients symptoms subscale and, age, sex, occupation and marital status ($p= 0.342$, 0.155, and 0.270) respectively at the four time points.

Table (4): Illustrated that there is statistically positive correlation between patients symptoms subscale and cancer type, therapeutic status (p =0.012, 0.027) .However, there was no statistically significant correlation between patients symptoms subscale and cancer stage, treatment type (p= 0.912, 0.392) respectively at the four time points.

Discussion

Patients with Advanced gynecological cancer experience numerous symptoms caused by the disease and the treatments they undergo. This symptom burden significantly impacts the quality of life for both patients and their caregivers, while also increasing medical costs **(Ko, & Lee, 2024).**

The most frequently perceived problems were financial problems, psychological issues, and physical symptoms, and the most frequent requests for professional support were financial help, psychological issues, and information need**. (Ko, & Lee, 2024).**

The integration of palliative care into standard cancer treatment has allowed for improved symptom mangement, relationship building and enhanced goal setting for patients and families **(Shah et al., 2022).**

The present study was aimed to evaluate the impact of palliative care on the symptoms relieve among gynecologic cancer patients treated at Women's Health Hospital.

The current study showed decrease Symptoms subscale score (fatigue, nausea and vomiting, Pain, dyspnoea, insomnia**,** appetite loss**,**constipation ,diarrhoea and financial difficulties).

These results are harmonious with **yennurajalingam, et al., (2011).** Those who research the effects of palliative care on symptoms in outpatient advanced cancer patients in Jordan and suggest that palliative care significantly reduced symptom distress in patients with advanced cancer as fatigue pain ,nausea,depression ,anxiety,drowsiness,dyspnea,anorexia ,sleep and well-being. This similarity   may explained by Arabian culture and their tradition have a part.

This finding disagreed with **Jia-Jing Lee et al., (2022),** who investigated the symptom burdens and quality of life in women recently diagnosed with ovarian cancer receiving chemotherapy and discovered that the patients' psychological distress was highest initially and then reduced. Physical symptom distress increased at the second chemotherapy cycle. Similar results were found for QOL, with the lowest QOL reported after the fifth cycle. This difference may explained by that study of Jing working on ovarian cancer while the current study done on all different types of gynecological cancer.

These results are inconsistent with **Barker et al., (2009),** who stated that elevated scores on the symptom scales of the EORTC QLQ-C30 indicate a significant level of symptom experience and consequently a low QoL. A rise in scores over time indicates a decline in QoL. Immediately after treatment, symptom scores for fatigue, nausea, loss of appetite and diarrhoea were all significantly higher than at pre-treatment assessment. Six weeks following radiotherapy, symptom scores for fatigue and diarrhoea remained significantly elevated in comparison to pre-treatment evaluations. From the researcher point of view this may be due to complication of treatment which may still for long time with patients.

This finding contradicts with **Thapa et al., (2018),** who examined the effects of cervical cancer on women's quality of life in Hubei, China, and found that patients receiving radiotherapy and chemotherapy reported more symptoms, such as fatigue, nausea and vomiting, pain, appetite loss, constipation, diarrhea, and financial challenges compared to those who had only surgery. This difference may explained by that study of Thapa working on cervical cancer while the current study done on all different types of gynecological cancer.

The present study demonstrated a statistically significant correlation between patients symptoms subscale and educational level (p =0.009), However, there was no statistically significant correlation between patients symptoms subscale and age, sex, and occupation and marital status (p= 0.342, 0.155, and 0.270) respectively at the four time points.

These findings align with **Malak et al., (2018).**Who conducted them study to determine the factors influencing the quality of life among older patients with cancer, aged 60 years and over during the treatment period in Jordan.And demonstrated that both hope and educational level had statistically significant positive correlations with all subscales of quality of life. Nonetheless, anxiety was associated negatively with physical, social-family and functional well-being subscales, while exhibiting a positive correlation with the emotional well-being subscale.This similarity related to the same culture and tradition.

This finding inconsistent with **Yeh, et al (2021) ,**that explored QOL predictors in patients with gynecological cancers, and examine the relationship between QOL and demographics, stress, coping strategies, and social support in Tiwain, revealing that patients' QOL had positive correlations with marriage, emotion-focused coping, problem-focused coping, and social support. These differences may be attributable to the different number of patients and different measurement methods.

This finding agree with **(Tai, et al.,2016),** who assess the symptom intensity of patients with advanced cancer in a palliative care unit and investigated the elements related to symptom enhancement conducted in Southern Taiwan, finding a notable correlation between pain relief and older age. The severity of symptoms decreased in the first week at the palliative care unit.. In addition, variations in sex and primary cancer sites may contribute to varying degrees of symptom improvement. This similarity may be attributable to the same longitudinal evaluations of symptoms improvement at for times.

The current study showed a correlation between patients symptoms subscale and cancer type and therapeutic status (p =0.012,0.027) .However, there was no statistically significant correlation between patients symptoms subscale and , cancer stage and treatment type (p= 0.912, 0.392 respectively) at the four time points.

These findings contradict those of **Al-Shandudi et al. (2022),** whose study aimed to determine factors influencing health-related quality of life, functioning, and physical symptoms in adult Omani colorectal cancer patients , strong significant associations was found between age and nausea/vomiting (β=9.1, p=.001), constipation (β=17.9, p=.009), diarrhea (β=10.0, p=.016), and financial difficulties (β=15.3, p<.001), with participants under 60 years old reporting higher scores for these symptoms. This difference due to the different cancer type.

These results are inconsistent with **Wu et al.,(2017).** Who carry out their research to examine the elements affecting the quality of life in gynecologic cancer patients and shows a significant relation between the cancer staging and the symptom scores.

This findings inconsistent with **Yeh., (2021).** Who carried out this research to evaluate the changes in symptom distress, stress, and quality of life (QOL) during chemotherapy and three months post-treatment, while also aiming to identify factors that predict QOL in the first year following a gynaecological cancer diagnosis in Taiwanese women. His study indicates that there are significant negative correlations between symptom distress, stress, and QOL over time. This difference back to the different follow up after chemotherapy and the current study after palliative care.

Study Strengths

The main strength in the present study was that it was the first study carried out to evaluate the impact of integrated palliative care on symptoms reliving among gynecologic cancer patients treated at Women's Health Hospital at Assuit University, Egypt.

Study Limitations
- Most of the health care staff has lack of knowledge regarding the palliative care.
- Difficulty in referral of the non-admitted patients the patient to a specialist physician because most them were from villages far from the Assiut University Hospital.

Conclusion

Integration of palliative care has a positive impact on improvement symptoms among gynecological cancer patient.

Recommendations
- Provide the palliative care for all gynecologic cancer patients from the start of diagnosis.
- Planning and implementing necessary educational program about the palliative care for gynecological cancer to raise awareness of nurses and women's and their families through various media.
- Training programs and workshops should be conducted for medical staff about how apply palliative care to improve gynecological cancer patients health and improve their quality of life.

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