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Transforming Pain into a Purpose: Post-Traumatic Growth and Life Meaning in Gynaecological Cancer

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ABSTRACT

Objective: This study explores the transformative journey of women diagnosed with gynaecological cancer, focusing on how post-traumatic growth (PTG) occurs and how the search for meaning in life intertwines with the recovery process. By examining the relationship between PTG and the search for life meaning through various socio-demographic factors, this research highlights the inner strength and resilience that often emerge during some of life's most challenging moments.
Method: A cross-sectional, descriptive, and correlational design was applied, involving 134 women undergoing treatment for gynaecological cancer. Data were collected using the Personal Information Form, Post-Traumatic Growth Inventory (PTGI), and Meaning in Life Questionnaire (MLQ). Statistical analyses were conducted to explore the relationships between the key psychological and demographic variables.
Results: Participants, with a mean age of 58.47 ± 12.47 years, reported profound growth in areas like spiritual understanding and meaning in life, although they faced challenges in rediscovering new interests and setting life goals. PTG levels were higher among married women and parents, and those with moderate incomes reported a deeper sense of meaning in life. A positive correlation between PTG and meaning in life emerged, indicating that personal growth is closely tied to finding purpose after trauma.
Conclusion: The findings highlight that many women with gynaecological cancer experience meaningful personal transformation, suggesting that addressing both psychosocial and existential dimensions is crucial in cancer care. Healthcare professionals, especially nurses, should adopt patient-centred, compassionate approaches that nurture resilience and support growth. Future research is encouraged to explore how cultural nuances shape PTG and meaning-seeking processes, offering deeper insights for holistic cancer care.
Keywords: Gynaecological cancer, post-traumatic growth, meaning in life, nursing care, women's health

INTRODUCTION

Cancer remains one of the most significant health challenges of the modern era, triggering a range of emotional responses, including fear, a sense of meaninglessness, and existential crisis (1,21). Gynaecological cancers, in particular, can profoundly impact a woman's psychological well-being by influencing sexual health, fertility, and self-identity (17,23). Global Cancer Observatory (GLOBOCAN) data from 2020 reported that approximately 1.39 million women worldwide were diagnosed with gynaecological cancer, including 12,906 in Turkey, underscoring the prevalence and significant emotional burden of the disease (21). Concepts such as femininity, motherhood, and sexuality are intrinsically linked to gynaecological health, making the diagnosis of cancer in this region deeply traumatic for many women (11,23). High levels of anxiety (66%) and depression (59%) are frequently observed among women diagnosed with gynaecological cancers, further highlighting the need for comprehensive psychosocial care (2).

Given the profound emotional toll associated with cancer, it is essential to explore how individuals adapt to these challenges and find ways to grow despite their distress. Post-traumatic growth (PTG) is defined as the perceived positive psychological change experienced because of the struggle with highly challenging life circumstances (18). Despite the emotional toll of a cancer diagnosis, evidence suggests that many patients experience significant personal growth and resilience following their diagnosis (14,9). These positive changes span five key dimensions: [1] an enhanced appreciation for life, [2] improved

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relationships, [3] greater personal strength, [4] recognition of new possibilities, and [5] spiritual and existential growth (19).

Incorporating strategies to foster PTG becomes particularly valuable for women facing gynaecological cancer, as it offers significant advantages in improving their overall well-being. PTG promotes emotional well-being, bolsters coping mechanisms, and encourages a deeper engagement with life. These benefits are essential in helping patients navigate the challenges of cancer treatment, reclaim control over their lives, and discover new purpose and motivation—elements that contribute to improved health outcomes and enhanced quality of life. Recent meta-analyses indicate that personality traits such as resilience, alongside coping strategies like religious coping and social support, play crucial roles in fostering PTG among cancer survivors (13).

However, it is important to recognise that PTG and distress are distinct constructs that often coexist. Tedeschi and Calhoun's model emphasises that PTG does not necessarily alleviate distress; rather, it arises from the process of grappling with trauma, where emotional pain and personal growth can occur simultaneously (20). This coexistence highlights the complexity of the recovery process and underscores the need for targeted interventions that address both psychological growth and emotional distress.

The search for meaning in life (MiL) further complements the concept of PTG, offering an essential avenue for emotional resilience. MiL becomes particularly relevant for cancer patients due to the existential challenges posed by a life-threatening illness. Establishing a connection with an existential source—whether spiritual or philosophical—allows individuals to cultivate resilience and discover purpose during adversity (7). Research has consistently demonstrated that finding meaning plays a critical role in how cancer patients navigate their diagnosis and treatment, alleviating anxiety and enhancing overall psychological well-being (16).

Moreover, the significance of MiL becomes even more pronounced in the advanced stages of cancer, where unresolved existential concerns can negatively affect the quality of life (10). Thus, addressing both PTG and MiL through integrated care approaches is essential for enhancing psychological well-being throughout the cancer journey, particularly for women managing the unique challenges of gynaecological cancers**.**

MATERIAL AND METHODS

Participants

The study included women who applied to the Gynaecology-Oncology outpatient clinic of Isparta City Hospital for a control examination or cancer treatment and met the inclusion criteria, including that at least two months had passed since their diagnosis. Women with other serious life-threatening diseases, psychotic and neurological disorders, or who underwent surgery for benign conditions were excluded from the study. The sample size was calculated using the "Exact Binomial" test family and the single sample ratio test, with 85% power to detect a medium effect size. Although the sample size was initially set at 127, the study was completed with 134 participants to account for potential non-response.

Procedure

Data were collected between January and July 2021 through face-to-face interviews conducted by the researcher. The Personal Information Form was used to evaluate socio-demographic characteristics, the Post-traumatic Growth Inventory (PTGI) was used to measure positive changes post-cancer diagnosis, and the Meaning in Life Questionnaire (MLQ) was employed to assess whether patients found meaning after diagnosis.

Tools

Personal Information Form

The form used in this study consists of 21 questions designed to collect detailed demographic and cancer-related information. This will help us better understand the participants' backgrounds and medical histories. The form includes socio-demographic details such as age, education level, marital status, perceived income, and household composition. Additionally, it addresses whether participants have had to leave their jobs due to illness and assesses their financial stability.

Post-Traumatic Growth Inventory (PTGI):

PTGI was developed by Tedeschi and Calhoun (18) and has been adapted into Turkish (22). It consists of 21 items, each scored from 0 to 5, with higher scores indicating greater post-traumatic growth (PTG). In this study, the Cronbach's alpha value was 0.924, demonstrating a strong internal consistency.

The Meaning in Life Questionnaire (MLQ)

Adapted into Turkish by Demirbaş et al. (2020), this questionnaire consists of two sub-dimensions: Presence of Meaning and Search for Meaning. It includes 10 items, each scored on a 7-point Likert scale. The Cronbach's alpha value was 0.797 for the Presence subscale and 0.710 for the Search subscale.

Ethics

The study was approved by the Ethics Committee of Süleyman Demirel University (SDU), and written informed consent was obtained from all participants. The inclusion of the study's instruments was also authorised. The study protocol was reviewed and approved under the decision number [39247].

Data Analysis

Statistical analysis was conducted using SPSS 20.0. The Tukey Summability Test was performed to assess the adequacy of the scales, and the Kolmogorov-Smirnov method was used to check for normality. Both parametric and non-parametric tests were applied as appropriate, including t-tests, ANOVAs, and

Pearson correlations. In addition, a multiple linear regression model was developed to explore the relationship between post-traumatic growth (PTG) and the meaning of life, while controlling for demographic characteristics.

RESULTS

Participant Characteristics

The study participants had an average age of 58.47 years (±12.47). The majority had completed primary education (73.7%), and most were married (78.4%) and parents (92.5%). Furthermore, approximately 26% of the participants reported that they had stopped working after receiving a cancer diagnosis, indicating a significant impact of the disease on their professional lives. Detailed demographic and clinical characteristics are presented in Table 1, which offers an overview of the participants' education levels, marital status, and other relevant demographic factors related to the study.

PTG and Meaning in Life Scores

The participants displayed relatively high overall Post-traumatic Growth (PTG) scores, with an average of 62.41±24.16. The sub-dimension scores were highest for spiritual understanding (3.94±1.44) and life meaning (5.90±1.81). In contrast, lower scores were found in discovering new interests (1.98±1.95) and having a clear life purpose (2.19±2.06). This suggests that while participants experienced significant spiritual and existential growth, they faced challenges in identifying new directions and purposes in life following their diagnosis. Detailed PTG and Meaning in Life (MiL) scores are outlined in Table 2, illustrating the variations across different growth dimensions.

Relationship Between PTG and Meaning in Life

A low to moderate positive correlation was observed between PTG and MiL scores (r=0.226; p=0.009), indicating that women who reported higher levels of post-traumatic growth also typically experienced greater meaning in life. This highlights the relationship between personal growth after traumatic events such as a cancer diagnosis and an individual's capacity to derive meaning from their experiences. Further exploration of these relationships, including the connection to demographic and clinical factors such as age and time since diagnosis, is illustrated in Table 3.

Sociodemographic and Disease-related Factors

Marital status significantly influenced PTG levels, with married participants showing markedly higher scores than their single or widowed counterparts (Table 4). Additionally, parents scored higher on the Meaning in Life scale, indicating the potential for children to enhance a sense of purpose following a cancer diagnosis. Income levels also impacted MiL, as lower-income participants exhibited higher scores in the search for meaning subscale, possibly indicating that economic struggles may intensify existential questioning. A detailed analysis of these socio-demographic factors is presented in Table 4.

Table 1. Participants' Distribution Based on Demographic Characteristics (n=134)

Categories	Subcategories	n	%
Age	years	58.47	12.47
Surgery time	months	23.97	23.18
Time since learning about the disease	months	24.25	22.77
Education	Primary education	98	73.7
	High school	28	21.1
	University	7	5.2
Marital status	Married	105	78.4
	Single	3	2.2
	Divorced	8	6.0
	Husband passed away	18	13.4
Have children	Yes	124	92.5
	No	10	7.5
Persons living with	Partner	39	29.1
	Partner and children	36	26.9
	Mother and father	41	30.6
	Other	18	13.4
Employment status	Yes	30	22.4
	No	104	77.6
Stopped working because of illness	Yes	34	26.0
	No	97	74.0
Income rate	Low	47	35.1
	Medium	83	61.9
	High	4	3.0
The type of cancer	Endometrium	75	56.4
	Cervix	16	12.0
	Ovary	42	31.6
Cancer stage	Stage 1	57	42.9
	Stage 2	34	25.6
	Stage 3	37	27.9
	Stage 4	5	3.8
Status of the surgery	Yes	126	94.0
	No	8	6.0
Status of having cancer in the immediate area	None	58	43.2
	Available	76	56.7
Sharing the experience of the disease with a relative	Yes	104	78.2
	No	29	21.8
Receiving social support after diagnosis	Yes	105	78.4
	No	29	21.6
Receiving psychological support	Yes	85	63.4
	No	49	36.6
Inability to perform duties	Yes	74	55.3
	No	60	44.7

Associations Between PTG, MiL, and Socio-demographic Characteristics

Table 5 presents the bivariate associations among PTG, MiL, and various socio-demographic characteristics. Marital status

emerged as a significant factor, with married participants reporting higher scores across multiple PTG dimensions, such as "New Possibilities" and "Improved Relationships" (p=0.001 and p=0.0018, respectively). In contrast, divorced or widowed individuals exhibited lower scores, particularly in "Spiritual Growth" and "Appreciation for Life," suggesting that a lack of a supportive partner may hinder growth post-diagnosis.

Table 2. Items with the Highest and Lowest Scores on PTGI and MiL (n=134)

Items	Mean±SD
Post-traumatic growth scale	
I have a better understanding of spiritual matters.	3.94±1.44
I better accept needing others.	3.49±1.78
I set a new direction for my life.	2.53±1.89
I established a new path for my life	1.98±1.95
Scale total score (n=21)	62.41±24.16
Meaning In Life	
I understand my life's meaning.	5.90±1.81
I have a good sense of what makes my life meaningful.	5.66±1.90
I am seeking a purpose or mission for my life	2.21±1.95
My life has no clear purpose	2.19±2.06
Scale total score (n=10)	35.67±9.63

Participants with children showed enhanced scores in "Personal Strength" and "Improved Relationships," indicating that family dynamics may bolster personal growth. Income rates also played a role; those in the high-income bracket scored higher on "Presence of Meaning" (p=0.0031), while lower-income participants excelled in the "Search for Meaning" (p=0.0417), suggesting that financial stability may influence meaning derivation.

Additionally, those who shared their illness experiences with close relatives reported significantly higher PTG and MiL scores, underscoring the importance of social support in fostering growth and meaning after a cancer diagnosis (Table 5). Overall, these findings reveal the crucial role socio-demographic factors play in shaping experiences of post-traumatic growth

Table 3. The Relationship between PTGI, MiL, and Their Sub-dimensions with Age, Duration of Surgery, and Time to Learn About the Disease (n=134)

	POM	SOM	MiL	Age	DOS	TTLATD
New Possibilities	0.175	-0.102	0.073	-0.202	0.079	0.117
	0.042*	0.239	0.401	**0.024***	0.374	0.177
Personal Strength	0.204	-0.173	0.020	-0.191	0.149	0.175
	0.018*	**0.045***	0.821	**0.033***	0.092	**0.043***
Spiritual Growth	0.134	-0.067	0.024	-0.167	-0.104	-0.079
	0.123	0.441	0.780	0.063	0.239	0.362
Appreciation for Life	0.271	-0.148	0.075	-0.207	0.046	0.078
	0.002*	0.089	0.387	**0.021***	0.608	0.372
Improved Relationships	0.181	-0.126	0.055	-0.110	0.087	0.120
	0.037*	0.145	0.529	0.220	0.324	0.166
PTGI General	0.226	-0.131	0.070	-0.192	0.075	0.113
	0.009*	0.131	0.421	**0.032***	0.397	0.193

POM: Presence of Meaning, SOM: Search for Meaning, MiL: Meaning in Life, DOS: Duration of Surgery, TTLATD: Time to Learn About the Disease
Values in bold are correlation values that are significant at the 0.05 level.

Table 4. Factors Affecting Post-Traumatic Growth Areas (n = 134)

Variables	Beta	p-value	95% CI (Lower, Upper)	SE (Standard Error)
Meaning in Life	0.062	0.790	(-0.345, 0.470)	0.104
Age	-0.001	0.998	(-0.030, 0.029)	0.015
Duration of the Surgery	-0.385	0.656	(-0.992, 0.492)	0.159
Time to Learn About the Disease	0.341	0.696	(-0.437, 1.119)	0.198
Education Level	-1.759	0.706	(-2.351, 1.792)	0.571
Marital Status	-7.497	**0.024***	(-13.550, -1.444)	3.070
Childbearing Status	-6.795	0.445	(-14.012, 2.417)	2.796
Income Rate	1.803	0.684	(-1.202, 4.808)	0.953
Cancer Stage	0.182	0.941	(-0.512, 0.876)	0.167
Quitting Work Due to Illness	-13.885	**0.017***	(-24.776, -2.994)	4.218

Model Statistics:
F-value: 5.162; Degrees of freedom (df): 9; Adjusted R^2: 0.312; $p < 0.05$, indicating overall model significance.
Explanations:
Beta: Standardised coefficients used to compare the effect size of the variables; 95% Confidence Interval (CI): Represents the range within which the true value of the coefficient likely falls; Standard Error (SE): Indicates the accuracy and precision of the coefficients; Variables with significant impact are highlighted in bold, and p-values less than 0.05 are marked with an asterisk (*) to denote statistical significance.

Table 5. Bivariate Associations Between PTGI, MiL, and Socio-Demographic Characteristics (n=134)

	New Possibilities	Personal strength	Spiritual Growth	Appreciation for Life	İmproved Relastionship	PTGI General	Search for Meaning	Presence of Meaning	MiL General
Marital Status									
Single	9,00±3,61[a]	7,33±2,08[a]	4,33±4,04	3,67±4,04[a]	10,33±5,51[a]	34,67±16,01[a]	17,33±10,69	13,33±9,71	30,67±19,22
Married	15,67±6,00[b]	11,73±5,17[b]	6,50±2,65	6,63±2,74[b]	21,95±8,08[b]	62,48±21,32[b]	24,04±5,82	11,38±7,84	35,42±9,03
Divorced	15,63±8,28[c]	11,38±5,68[c]	6,88±3,36[a]	6,50±3,30	19,5±12,29	59,88±30,64	21,88±8,64	9,63±4,57	31,50±9,29
His wife passed away	9,89±5,49	7,72±4,98	3,50±3,09[b]	3,61±2,91	17,06±8,31	41,78±21,97	23,28±6,60	16,56±8,71	39,83±10,80
Test value	**F=5,630 p=*0,001* *b>a;b>c;c>a***	**F=3,666 p=*0,014* b>a;b>c;c>a**	**F=6,576 p=*<0,001* a>b**	**F=6,690 p=*<0,001* *b>a***	**F=3,495 p=*0,018* b>a**	**F=5,810 p=*0,001* *b>a***	F=1,410 p=*0,606*	F=2,511 p=*0,118*	F=1,956 p=*0,124*
Childbearing status									
Yes	14,70±6,41	11,05±5,39	6,04±2,91	6,10±3,00	21,03±8,59	58,92±23,29	24,10±5,90	11,75±7,95	35,85±9,50
No	15,20±6,03	11,40±4,09	6,40±3,50	6,80±2,97	19,10±8,81	58,90±21,68	18,20±8,05	15,30±8,03	33,50±11,44
Test value	t=0,056 p=0,813	t=0,041 p=0,841	t=0,137 p=*0,712*	t=0,508 p=*0,477*	t=0,466 p=*0,496*	t=0,000 p=*0,998*	**t=8,742 p=*0,005***	t=1,842 p=*0,287*	t=0,548 p=*0,481*
Person living at home									
Spouse	15,44±7,45	10,92±5,54	6,46±3,15	6,46±2,58	21,69±9,65	60,97±25,66	22,62±7,00	13,18±8,06	35,79±9,88
Spouse and children	16,22±5,64[a]	13,06±4,96[a]	6,58±2,67	7,08±2,77[a]	22,39±7,81	65,33±20,78[a]	25,06±5,65	10,03±8,06	35,08±9,98
Family	14,51±5,62	10,41±4,98	6,05±2,51[a]	6,12±3,00	20,66±7,68	57,76±20,22	24,29±5,02	11,37±7,00	35,66±7,66
Other	10,78±5,48[b]	8,94±5,22[b]	4,22±3,42[b]	3,67±3,11[b]	16,67±8,94	44,28±22,91[b]	21,67±7,65	14,94±9,10	36,61±12,74
Test value	**F=3,317 p=*0,022* *a>b***	**F=3,007 p=*0,033* a>b**	**F=3,094 p=*0,029* a>b**	**F=6,051 p=*0,001* a>b**	F=1,981 p=*0,120*	**F=3,684 p=*0,014* a>b**	F=1,746 p=*0,161*	F=1,960 p=*0,123*	F=0,102 p=*0,959*
Working Status									
Yes	16,1±4,62	11,73±4,11	6,67±1,94	7,17±2,20	21,8±7,10	63,47±16,28	22,43±5,21	14,07±8,36	36,50±9,11
No	14,35±6,75	10,88±5,59	5,89±3,17	5,86±3,14	20,63±8,99	57,61±24,63	24,01±6,49	11,42±7,81	35,43±9,80
Test value	t=1,780 p=*0,184*	t=0,597 p=*0,441*	t=1,608 p=*0,207*	**t=4,581 p=*0,034***	t=0,434 p=*0,511*	t=1,505 p=*0,222*	t=1,491 p=*0,224*	t=2,584 p=*0,110*	t=0,284 p=*0,595*
İncome rate									
Low	13,91±6,14	10,57±4,27	6,06±3,26	5,79±2,80	20,72±7,91	57,06±20,77	60,45±21,76	62,41±24,16[a]	27,00±2,83
Middle	15,19±6,49	11,4±5,74	6,01±2,79	6,29±3,11	20,84±9,06	59,73±24,36	63,28±25,46	23,30±6,72[b]	23,66±6,24
High	15±7,07	10,25±7,41	7,25±2,75	7,5±2,89	23,75±7,59	63,75±26,76	67,5±28,08	23,70±6,07[c]	14,32±8,57
Test value	F=0,605 p=0,547	F=0,409 p=*0,665*	F=0,334 p=*0,717*	F=0,839 p=*0,435*	F=0,229 p=*0,796*	F=0,288 p=*0,750*	F=0,650 p=*0,417*	**F=3,377 p=*0,031* *a>b; c>b; a>c***	**F=2,302 p=*0,043***

Table 5. Continue

	New Possibilities	Personal strength	Spiritual Growth	Appreciation for Life	İmproved Relastionship	PTGI General	Search for Meaning	Presence of Meaning	MiL General
Talking about her illness									
Yes	15,52±6,10	11,78±5,07	6,47±2,85	6,39±2,98	21,91±8,39	62,08±22,01	23,86±6,10	11,62±7,50	35,47±8,77
No	11,62±6,33	8,45±5,42	4,55±2,89	5,14±2,86	17,17±8,57	46,93±23,51	22,97±6,90	13,69±9,50	36,66±12,43
Test	**t=1,045**	**t=0,384**	**t=0,000**	**t=0,143**	**t=2,221**	**t=0,840**	t=0,378	t=0,146	t=0,471
value	**p=0,003**	**p=*0,002***	**p=*0,002***	**p=0,045**	**p=0,008**	**p=0,002**	p=0,501	p=0,218	p=*0,561*
Status of fulfilling duties									
Yes	15,51±6,16	11,78±5,03	6,26±2,83	6,70±2,87	22,11±7,99	62,36±21,92	24,59±5,84	11,12±7,74	35,72±9,35
No	13,78±6,52	10,2±5,51	5,83±3,09	5,47±3,03	19,38±9,12	54,67±23,97	22,50±6,57	13,12±8,21	35,62±10,05
Test	t=1,706	t=2,313	t=0,391	**t=1,796**	t=1,026	t=1,794	t=0,467	t=0,237	t=0,002
value	p=*0,118*	p=*0,085*	p=*0,410*	**p=*0,017***	p=*0,068*	p=*0,055*	p=*0,053*	p=0,151	p=0,953
Receiving hormone therapy									
Yes	19,80±4,82	10,95±5,29	8,00±2,12	8,60±1,34	28,40±5,98	79,20±17,34	25,40±2,19	11,60±13,15	37,00±14,28
No	14,54±6,35	14,40±4,72	5,99±2,95	6,05±3,00	20,60±8,56	58,13±22,98	23,59±6,34	12,03±7,80	35,62±9,48
Test	t=1,342	t=0,054	t=0,022	t=0,508	**t=0,699**	**t=0,325**	t=0,057	t=0,112	t=0,187
Value	p=*0,070*	p=*0,153*	p=*0,135*	p=*0,062*	**p=*0,046***	**p=*0,045***	p=*0,603*	p=*0,746*	p=*0,724*

and meaning in life, emphasising the necessity for healthcare providers to address these aspects in supporting cancer patients during recovery.

DISCUSSION

This study aimed to explore the relationship between post-traumatic growth (PTG) and meaning in life (MiL) among women diagnosed with gynaecological cancer. Our findings show a positive correlation between PTG and MiL, indicating that personal meaning significantly enhances psychological resilience, consistent with previous research (14). By cultivating a sense of purpose, patients are better equipped to cope with the emotional challenges of diagnosis and treatment, as PTG contributes to effective coping strategies (1).

MiL plays a crucial role in alleviating anxiety and depression among patients with cancer. As Oh et al. (16) highlight, higher MiL levels are associated with reduced psychological distress, supporting our findings that participants with higher MiL scores demonstrate better psychological well-being. These results reinforce the importance of interventions that focus on meaning-making processes to promote emotional health.

As shown in Table 5, socio-demographic factors significantly influence PTG and MiL outcomes. Marital status emerged as a key variable, with married participants reporting higher PTG scores than single or widowed participants ($p < 0.05$), aligning with research indicating that emotional support from spouses fosters resilience (3). Participants living with both a spouse and children exhibited higher PTG scores, especially in areas such as personal strength and improved relationships ($p = 0.033$), underscoring the role of family support (23, 9).

Income also influenced MiL outcomes, with participants in the higher-income bracket reporting higher MiL scores ($p = 0.031$). This suggests that financial stability may ease existential concerns, making it easier for patients to find meaning (16). Furthermore, sharing the cancer experience with others was associated with higher PTG ($p = 0.002$), emphasising the value of social support in fostering psychological growth (2, 23).

The cultural and familial contexts significantly shaped the outcomes. In Turkey, family involvement is integral to the healthcare experience, which likely amplifies the benefits of social support (11, 12). This aligns with prior research showing that cultural dynamics strengthen emotional well-being and enhance PTG (23).

PTG and distress often coexist, as Tedeschi and Calhoun (20) noted, with growth arising alongside emotional pain. Our findings confirm this duality, suggesting that psychosocial interventions should address both aspects to ensure comprehensive care. Meaning-centred therapies, such as those proposed by Breitbart et al. (4), offer promising ways to foster growth while managing distress among gynaecological cancer patients.

A key limitation of this study is the clinical heterogeneity of the sample, which included patients with varying cancer

types, stages, and treatment modalities. These differences may have influenced PTG and MiL levels, as different cancers elicit varied psychological responses (3, 13). For example, patients in advanced stages may show distinct patterns of distress and growth, requiring tailored interventions (9). Future research should employ stratified analyses to explore these clinical factors, while longitudinal studies could further elucidate the evolution of PTG and MiL over time (17).

The inclusion criterion requiring at least 2 months post-diagnosis was essential to minimise variability in the initial psychological responses. This aligns with Tedeschi and Calhoun's (20) model, which emphasises that PTG develops only after individuals have processed traumatic events. However, different treatment phases, such as active treatment versus remission, may still influence the outcomes. For instance, patients undergoing intensive treatment may experience higher distress, whereas those in remission may report greater growth and personal strength (14). Future research could benefit from stratifying participants by treatment stage to provide more precise interventions throughout the cancer care continuum (4, 1).

In conclusion, this study underscores the importance of integrating PTG-focused interventions into gynaecological cancer care. Health professionals, particularly nurses, should adopt patient-centred approaches that address both physical and emotional needs. Care plans should include meaning-centred therapies, mindfulness practises, and social support networks to foster psychological growth and resilience (5). These culturally tailored interventions align with patients' values, promoting holistic recovery and well-being throughout their cancer journey.

Clinical Impact Statement

This study significantly contributes to the understanding of the connection between post-traumatic growth (PTG) and meaning in life (MiL) for women with gynaecological cancer, highlighting notable growth in spiritual understanding and life meaning. Notably, married individuals and those with moderate incomes demonstrated higher PTG and life meaning. These findings emphasise factors to consider in evaluating patients' psychosocial well-being and guiding healthcare professionals, especially nurses, in adopting more effective patient-focused care. Future research, with cultural considerations, holds potential for insights on how to integrate PTG more effectively into clinical applications.

Limitations

This study has several limitations that should be acknowledged. First, the sample was not fully representative, limiting the generalizability of the findings to the broader population of women with gynaecological cancer. Additionally, the cross-sectional design restricts our ability to draw causal conclusions about the relationships between PTG and MiL. Longitudinal studies are necessary to track how these variables interact over time, particularly as patients progress through different stages of treatment and recovery.

Furthermore, the clinical heterogeneity within the sample, such as differences in cancer type, stage, and treatment modalities, may have influenced the results. Future studies could benefit from focusing on more homogenous samples or adjusting for these variables more rigorously. Additionally, the reliance on self-reported data, particularly for clinical characteristics, poses a risk of bias, as patients may not accurately recall or interpret their medical histories.

Lastly, the cultural context of the Turkish population may limit the applicability of these findings to other regions, as cultural norms around family support, religion, and coping mechanisms differ significantly across countries. Expanding this research to include more diverse populations could provide a more comprehensive understanding of how PTG and MiL manifest in different cultural contexts.

CONCLUSION

This study highlights the importance of addressing both the psychosocial and existential needs of women diagnosed with gynaecological cancer. The positive relationship between post-traumatic growth (PTG) and meaning in life (MiL) suggests that many cancer survivors derive personal significance from their challenging experiences. Therefore, healthcare providers must consider not only the physical treatment of cancer but also the emotional and existential challenges faced by patients.

The findings indicate that while a higher level of PTG is associated with a stronger sense of meaning in life, PTG and psychological distress often co-exist. Psychosocial interventions should focus on fostering PTG while also addressing the emotional pain that can accompany it. Nurses and mental health professionals play a crucial role in supporting patients in navigating both the positive and negative aspects of their cancer journey.

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REFERENCES

1. Aliche CJ, Ifeagwazi CM, Ezenwa MO. Relationship between mindfulness, meaning in life and post-traumatic growth among Nigerian cancer patients. Psychol Health Med. 2023;28(2):475-485. doi: 10.1080/13548506.2022.2095576.
2. Aquil T, Webster L, Thompson M. Addressing anxiety and depression in gynaecological cancer patients. J Psychosoc Oncol. 2021;39(2):125-135.
3. Bellizzi KM, Blank TO. Predicting post-traumatic growth in breast cancer survivors. Health Psychol. 2006;25(1):47-56.
4. Breitbart W, Rosenfeld B, Pessin H et al. Meaning-centred group psychotherapy for cancer patients. J Clin Oncol. 2021;29(4):461-467. doi: 10.1200/JCO.2010.32.4437.
5. Cengiz S, Gündüz A, Yılmaz D. The relationship between meaning in life and psychological well-being among cancer patients. Eur J Cancer Care. 2021;30(3). doi: 10.1111/ecc.13337.
6. Chen Z, Lu S, Huang C et al. Post-traumatic growth and psychological distress in cancer patients: A cross-cultural study. Psychooncology. 2022;31(2):256-263.
7. Frankl VE. Man's Search for Meaning. Boston: Beacon Press; 2010.
8. Golafshani N, Leifso S, Woollard S. Meaning in life and cancer: A qualitative study. J Palliat Care. 2019;35(2):110-115.
9. Gori A, Topino E, Craparo G et al. Post-traumatic growth, distress, and resilience among cancer survivors: A latent growth curve approach. Front Psychol. 2021;12:666470. doi: 10.3389/fpsyg.2021.666470.
10. Gravier A, Mesquida J, Dupont A, Boon H. Existential concerns and quality of life in advanced cancer patients. Support Care Cancer. 2020;28(6):2725-2732.
11. Güler Uslu S. The psychological impact of gynaecological cancers on women: A review. Turk J Psychol. 2020;35(2):1-15.
12. Körükcü Ö. The impact of gynaecological cancer diagnosis on women's psychosocial well-being. J Nurs Midwifery. 2018;17(3):45-52.
13. Knauer JL, Cassedy H, Schwartz JM. Meta-analysis of post-traumatic growth among cancer survivors. J Health Psychol. 2022;27(1):112-130. doi: 10.1177/1359105320980577.
14. Marziliano A, Tuman M, Moyer A. The relationship between posttraumatic growth and distress in cancer patients. Psychooncology. 2020;29:1375-1383.
15. Mostarac I, Brajković L. Life after facing cancer: Posttraumatic growth, meaning in life, and life satisfaction. J Clin Psychol Med Settings. 2022;29(1):92-102. doi: 10.1007/s10880-021-09786-0.
16. Oh PJ, Lee JS, Lee SH. Meaning in life as a predictor of anxiety and depression among cancer patients. Cancer Nurs. 2021;44(5):371-378.
17. Swartzman S, Booth JN, Munro A, Sani F. Posttraumatic growth following cancer: A systematic review. Psychooncology. 2017;26(2):200-209.
18. Tedeschi RG, Calhoun LG. The post-traumatic growth inventory: Measuring the positive legacy of trauma. J Trauma Stress. 1996;9(3):455-471.
19. Tedeschi RG, Calhoun LG. Post-traumatic growth: Conceptual foundations and empirical evidence. Psychol Inq. 2004;15(1):1-18.
20. Tedeschi RG, Calhoun LG. Posttraumatic growth: Theory, research, and applications. London: Routledge; 2018.
21. World Health Organisation. Cancer fact sheet [Internet]. 2024 [cited 2024 Oct 5]. https://www.who.int/news-room/fact-sheets/detail/cancer
22. Ye Z, Liu X, Xia Z et al. Meaning-centred interventions for cancer survivors: A randomised controlled trial. Psychooncology. 2018;27(12):2802-2810.
23. Zhou W, Wang Z, Zhang D, Wu M. Post-traumatic growth and coping strategies in women with gynaecological cancer. Front Psychol. 2021;12:641629. doi: 10.3389/fpsyg.2021.641629.