IJBMC
International Journal of Body, Mind and Culture

Volume 12, Issue 6, pp 180-190
DOI: 10.61838/ijbmc.v12i6.1056

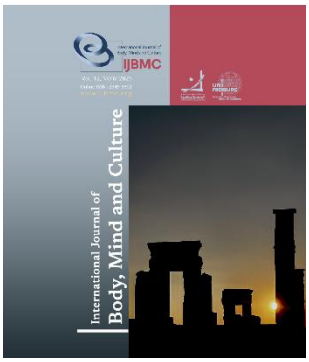
Article type:
Original Research

Association Between Self-Efficacy and Performance Status Among Cancer Patients: A Cross-Sectional Study

Duaa Sadiq. Kadhim[1*], Shatha Saadi. Mohammed[2]

1 Master of Nursing Sciences Student, Department of Community Health Nursing, College of Nursing, University of Babylon, Iraq.
2 Professor , Department of Community Health Nursing, College of Nursing, University of Babylon, Babylon, Iraq.

Corresponding author email address:
nur658.duaa.sadiq@student.uobabylon.edu.iq



Article history:

Received 24 Feb 2025
Revised 18 May 2025
Accepted 28 June 2025
Published online 01 Sep 2025

How to cite this article:
Kadhim, D. S., & Mohammed, S. S. (2025). Association Between Self-Efficacy and Performance Status Among Cancer Patients: A Cross-Sectional Study. International Journal of Body, Mind and Culture, 12(6), 180-190.

ABSTRACT

Objective: This study aimed to evaluate the relationship between self-efficacy and performance status among cancer patients. Additionally, it examined the influence of socio-demographic variables on both constructs.

Methods and Materials: A descriptive correlational study was conducted from October 2024 to June 2025 at two oncology centers in Al-Hillah, Iraq. A convenience sample of 325 cancer patients was selected using non-probability sampling. Data were collected using a structured questionnaire comprising three sections: socio-demographic characteristics, the General Self-Efficacy Scale (6 items), and the Zubrod Performance Status (ZPS) scale. Validity was ensured through expert review, and statistical analyses were performed using SPSS-23. Descriptive and inferential statistics (Kruskal-Wallis, Pearson correlation, linear regression) were applied, with a significance level set at $p \leq 0.05$.

Findings: Of the 325 participants, 66.5% had high self-efficacy, while 72.9% showed high functional performance (low ZPS scores). A strong negative relationship was found between self-efficacy and ZPS ($\beta = -0.798$, $p < 0.001$), indicating that higher self-efficacy predicted better functional status. Socio-demographic variables such as education, income, and occupation were significantly associated with both self-efficacy and performance status. Age was negatively correlated with self-efficacy and positively correlated with ZPS.

Conclusion: Self-efficacy significantly influences the functional capacity of cancer patients. Enhancing patients' belief in their ability to manage disease-related challenges could improve performance outcomes. Integrating self-efficacy training into psycho-oncological care is recommended.

Keywords: self -efficacy, performance status, cancer, demographic data.

Introduction

Cancer is a complicated institution of diseases characterized by the uncontrolled increase and spread of abnormal cells. and is one of the foremost reasons for deaths throughout the world (Chandraprasad et al., 2022), Although anti-cancer therapies have made great progress, patients face various physical and psychological challenges. They perceive their illness is closely associated with their both physical and emotional health Thus, addressing the individual differences is important (George et al., 2021). In their Cancer Behavior Inventory (CBI), self-efficacy is in particular linked to cancer coping behaviors and communicating successfully with healthcare vendors (Kurtz et al., 2008).

Self-efficacy plays a crucial role in improving both psychological and physical health outcomes for cancer patients. Higher self-efficacy levels experience better management of symptoms. It significantly influences cancer patients' coping mechanisms, treatment adherence, and overall well-being (Abbass, 2024). It is associated with positive health behaviors and is a central

component of psychological interventions for cancer patients (Merluzzi et al., 2018), Bandura defined self-efficacy as one's judgment of his/her competence in actualizing certain activities (Kurtz et al., 2008). Moreover, higher self-efficacy levels are associated with greater physical functioning, health status, and satisfaction with the performance (Martinez-Calderon et al., 2018), Self-efficacy at once influences performance status by way of shaping patients' capability to self-control signs and symptoms, adhere to remedy regimens, and keep independence (Fang, 2020).

Performance status(PS) is a crucial measure utilized in oncology to assess a person affected by most cancers' useful ability and common fitness status. It is important to assess remedy tolerance, expect diagnosis, and guide healing choices (Simcock & Wright, 2020). A lower performance frame is regularly related to poor consequences (Roca et al., 2019). Studies highlight that most cancer patients with better self-efficacy have interaction more often in bodily pastime, creating an instantaneous pathway to improved performance reputation (Hardcastle et al., 2021).

Additionally, demographic variables also have an effect on self-efficacy and performance status in cancer patients (Karademas et al., 2023),Younger patients have higher self-efficacy due to extra bodily resilience (Ma et al., 2024). Older patients are more likely to have physical impairments can exacerbate the impact of most cancers on PS (Roca et al., 2019). Women may additionally show decreased self-efficacy compared to men due to cultural or social expectations (Hashim & Khalil, 2018) . Educated patients who are married with better economic status (ES) are much more likely to adopt self-management techniques (Masoompour et al., 2017), right of entry to healthcare services (Bourgeois et al., 2024) and emotional and practical aid from caregivers (Wang et al., 2022).

The objectives of the current study deal with assessing the performance status of patients with cancer, Identify if the self-efficacy can serve a predicted variable of performance status and Investigate the variation in performance status and self-efficacy in patients with cancer with respect socio-demographic characteristics Cancer.

Methods and Materials

This study employ The descriptive correlation study design was used in this quantitative research carried out to accomplish the objectives of this study, which is an assessment of the influence of self-efficacy on performance status in patients with cancer in AL-Hillah City. The study was conducted over eight months, from October 1, 2024, to June 7, 2025, at Al-Hillah City in oncology centers and hospitals that hold the oncology center, including Imam AL-Sadiq Teaching Hospital and Babylon Oncology Center, which is found in Marjan Teaching Hospital.

A Convenience sample of (N=325) patients was selected by utilization of the nonprobability sampling method.The patients comprised (2062). was distributed throughout the Babylon oncology center and Imam AL-Sadiq Hospital the required sample size was calculated to be (325) patients. the sample size was proportionate to the total population while maintaining the desired confidence level and precision. The data was gathered by using a questionnaire and interviews with participants. comprising socio-demographic.

Instruments

Content validity obtained of the questionnaire was established through the a panel of (18) expert in of different specialties related to the field of the present study. to determine the Questionnaire visibility and competence in order to clarify these phenomena to assess the performance status in patients with cancer As well as identify if the self-efficacy can serve a predicted variable of performance status and investigate the variation in performance status and self-efficacy in patients with cancer with respect socio-demographic characteristics Cancer. A preliminary Arabic and English version of the questionnaire distributed among (17) experts.

The study instrument was a special questionnaire consisting of closed-ended questions that was also prepared.The questionnaire consisted of three parts. The first part included Socio-demographic characteristics consists Of (6-items)(Gender, Patient age ,Marital status ,Level of education ,Occupation ,Monthly income).The second part is the Self-Efficacy for Managing Chronic Disease Scale: General self-efficacy scale (GES) this part consists of (6) items each asking participants to rate

their confidence on a scale from 1 (not confident) to 10 (totally confident). which are concerned to assess cancer patients' confidence in managing various aspects of their health. The third part isPerformance Status (Zubrod Performance Status - ZPS): The (ZPS) scale will be used to evaluate the patients' functional capacity, specifically their ability to perform daily tasks. The ZPS scale includes five levels, ranging from "fully active" (score 0) to "completely disabled" (score 4).

Data Analysis

All statistical analyses were performed using both SPSS-23 and Microsoft Excel (2010) programs. All data were analyzed by both descriptive and inferential statistical methods. Descriptive statistics were used to summarize the socio-demographic characteristics of the participants and overall evaluation of study parameters among patients with cancer. Inferential statistics: the choice of non-parametric tests (Kruskal-Wallis H test) was appropriate to assess variations in dependent variables concerning independent variables. Additionally, the Pearson's Correlation Coefficient and Simple Linear Regression tests were run to evaluate any statistical association. Statistical significance was set at $P \leq 0.05$.

Findings and Results

Table 1 explain to The socio-demographic characteristics of the study sample reveal that the majority of cancer patients are aged 60 years and older (34.8%), with a mean age of 55.49 ± 12.70 years. Most participants are female (68.0%). Regarding education, nearly one-fourth of the sample (24.3%) is illiterate, and only 12.9% have attained higher education. Marital status data indicate that most participants are married (86.8%), while smaller proportions are single (7.1%), divorced (2.5%), or widowed (3.7%). Employment status shows that a significant portion (57.8%) of patients are unemployed, with 23.4% being retired. Income distribution reveals that % o53.8f participants report enough income.

Table 1

Socio-demographic data

SDVs	Classification	No.	%
Age (years)	<30	13	4.0
	30-39	27	8.3
	40-49	43	13.2
	50-59	113	34.8
	≥60	129	39.7
	M ± SD	55.49±12.701	
Sex	Male	104	32.0
	Female	221	68.0
Education level	Illiterate	79	24.3
	Reads and writes	52	16.0
	Elementary	53	16.3
	Intermediate	38	11.7
	Preparatory	61	18.8
	Institute or college	42	12.9
Marital status	Single	23	7.1
	Married	282	86.8
	Divorced	8	2.5
	Widowed	12	3.7
Occupation	Employee	39	12.0
	Self-employed	22	6.8
	Retired	76	23.4
	Unemployed	188	57.8
Income/monthly	Not enough	122	37.5
	Somewhat enough	28	8.6
	Enough	175	53.8

M: Mean for total score, SD=Standard Deviation for total score

Table 2 gives an overall evaluation of key study parameters among cancer patients. The Self-Efficacy for Managing Chronic Disease The 6-item scale indicates that a majority of patients (66.5%) had high self-efficacy

Ijbmc.org
E-ISSN: 2345-5802

(scores >42), with a mean score of 44.99±13.745, suggesting strong confidence in managing their condition. Meanwhile, 21.5% exhibited moderate self-efficacy (24.1-42), and 12.0% had low self-efficacy (<24).

The Zubrod Performance Status (ZPS), which assesses functional performance and activity levels, indicates that 72.9% of patients had high performance status (≤1.33), meaning they were mostly active. However, 15.7% had low performance status (>2.66), indicating significant functional impairment, while 11.4% were in the moderate category (1.34-2.66). The mean ZPS score of 1.32±1.037 suggests that most patients had good functional capacity.

Table 2

Overall Evaluation of Study Parameters among Patients with Cancer

Variables	Score	No.	%	Eva.
Self-Efficacy for Managing Chronic Disease 6-item Scale	Low (<24)	39	12.0	44.99±13.745
	Moderate (24.1-42)	70	21.5	
	High (>42)	216	66.5	
	Total	325	100.0	
Zubrod Performance Status (ZPS)	High (≤1.33)	237	72.9	1.32±1.037
	Moderate (1.34-2.66)	37	11.4	
	Low (>2.66)	51	15.7	
	Total	325	100.0	

M: Mean for total score, SD=Standard Deviation for total score

Self-efficacy has a significant negative effect on performance status (ZPS) (β = -0.798; p < .001). Since lower ZPS scores indicate better functional status, this negative relationship suggests that higher self-efficacy is associated with improved performance status (R^2 = 0.6367) as shown in Table 3 and Figure 1.

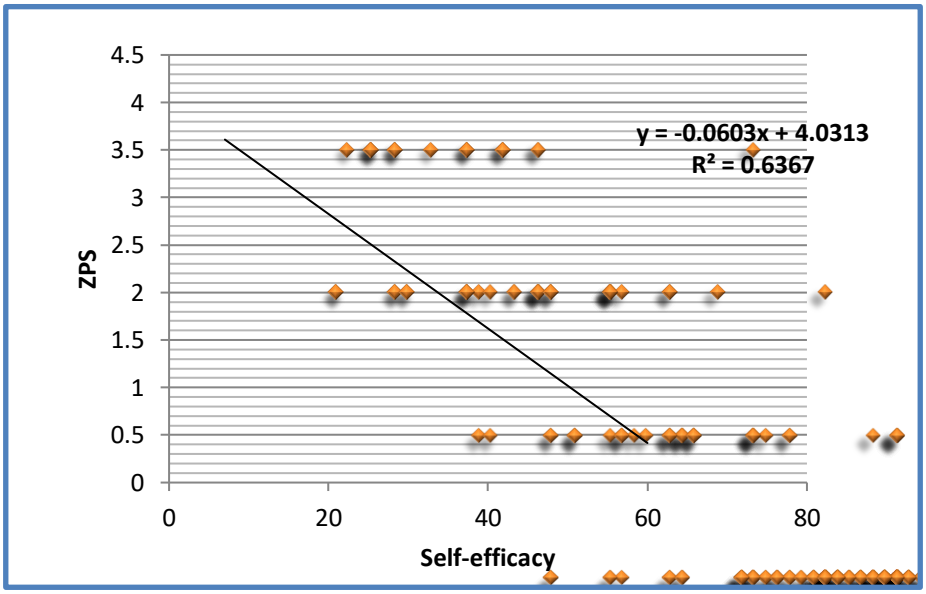
Table 3

Influence of Self-Efficacy on and Performance Status in Patients with Cancer

Variables	Unstandardized Coefficients		Standardized Coefficients	T	*Sig.*
	B	Std. Error	Beta		
ZPS	-.060	.003	-.798	-23.791	.000
Independent Variables: Self-efficacy					

Figure 1

Relationship between Self-Efficacy and Performance Status in Patients with Cancer



In Table 4 show The correlation analysis indicates that age is negatively correlated with self-efficacy (r = -0.265, p < .01), suggesting that older patients have lower self-efficacy and engage. Additionally, age is positively correlated with performance status (r = 0.282, p < .01), meaning that older patients tend to have poorer functional status. Since lower ZPS scores indicate better performance (Figure 2).

Table 4

Relationship between Self-efficacy, Performance Status and Age

Correlations	1
1. Age	1
2. Self-efficacy	-.265-**
4. ZPS	.282**
*. Corelation is significant at the 0.05 level (2-tailed).	

Figure 2

Relationship between Age and Self-efficacy

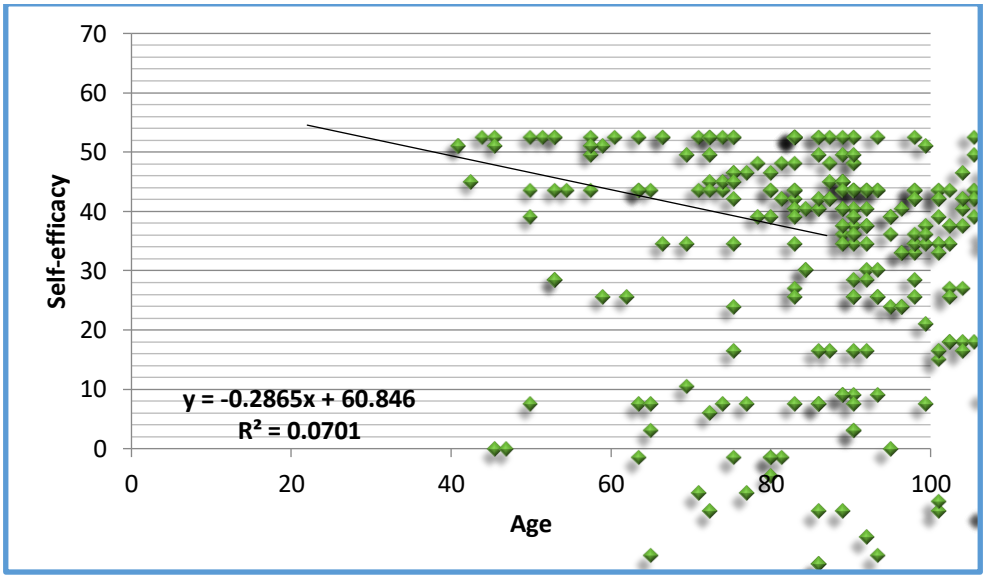


Table 5 reveals to th significant differences present in self-efficacy among cancer patients based on gender (χ^2 = 4.570, p = .033), education level (χ^2 = 24.214, p = .001), occupation (χ^2 = 9.248, p = .026), and monthly income (χ^2 = 12.233, p = .002). Males, those with higher education, employed or retired individuals, and those with sufficient income tend to have higher self-efficacy. However, no significant differences were found based on marital status (χ^2 = 3.443, p = .238).

Table 5

Statistical Differences in Self-efficacy in Patients with Cancer between Groups of Socio-demographic Characteristics

Variables	Ranks			$^b\chi^2$	Sig.
	Class	No.	Mean Rank		
Gender	Male	104	170.63	4.570	.033
	Female	221	146.79		
Education level	Illiterate	79	120.59	24.214	.001
	Reads and writes	52	167.68		
	Elementary	53	162.80		
	Intermediate	38	184.59		
	Preparatory	61	183.11		
	Institute or college	42	188.46		
Marital status	Single	23	171.26	3.443	.238

Ijbmc.org
E-ISSN: 2345-5802

	Married	282	148.11		
	Divorced	8	217.50		
	Widowed	12	181.08		
Occupation	Employee	39	184.14	9.248	.026
	Self-employed	22	143.18		
	Retired	76	180.70		
	Unemployed	188	150.09		
Monthly income	Not enough	122	141.28	12.233	.002
	Somewhat enough	28	150.41		
	Enough	175	179.11		

[b]= Kruskal Wallis Test; n= number,; sig.= significant level at ≤0.05.

In Table 6 show The analysis reveals significant differences in performance status (ZPS) among cancer patients based on education level (χ^2 = 14.412, p = .013), occupation (χ^2 = 9.223, p = .026), and monthly income (χ^2 = 8.803, p = .012). Patients with higher education, employment, and sufficient income tend to have better performance status (lower ZPS scores). However, gender (χ^2 = 1.157, p = .282) and marital status (χ^2 = 4.140, p = .247) did not show significant differences.

Table 6

Statistical Differences in Performance Status (ZPS) in Patients with Cancer between Groups of Socio-demographic Characteristics.

Variables	Ranks			[b]χ^2	Sig.
	Class	No.	Mean Rank		
Gender	Male	104	170.35	1.157	.282
	Female	221	159.54		
	Female	221	159.54		
Education level	Illiterate	79	190.58	14.412	.013
	Reads and writes	52	172.28		
	Elementary	53	152.26		
	Intermediate	38	152.96		
	Preparatory	61	146.76		
	Institute or college	42	145.86		
Marital status	Single	23	133.59	4.140	.247
	Married	282	166.29		
	Divorced	8	166.69		
	Widowed	12	139.71		
Occupation	Employee	39	139.29	9.223	.026
	Self-employed	22	177.98		
	Retired	76	146.47		
	Unemployed	188	172.85		
Monthly income	Not enough	122	180.94	8.803	.012
	Somewhat enough	28	152.66		
	Enough	175	152.15		

b= Kruskal Wallis Test; n= number,; sig.= significant level at 0.05.

Discussion and Conclusion

Study sample demographic characteristics according to table 1 results, The ages of the participants in the study (≥60 years old) were recorded, and the highest percentage (39.7%) was recorded. These results support those of a study in which the majority of study samples were aged between (56-70) years old. This finding clearly indicates that the disease occurs mostly in advanced age, as age expresses an experience of deteriorating physical and psychological functions (64) (42.7%). those of a study applied by other study in 2021 (Hashim, 2021). In our opinion, Accumulation of genetic mutations with age Over time, the body's cells are exposed to a range of environmental factors (such as smoking, radiation, and pollution) and internal factors (such as gene copying errors), leading to the accumulation of mutations in the DNA. As the number of these mutations increases, the likelihood of cancer cells developing increases ,The immune system also weakens with age, reducing its ability to detect and destroy abnormal cells before they develop into tumors.

According to sex of study the result found that the study participants were mostly women (221) , it constituted (68.0 %) of the study findings, the majority

of the research sample is female. This result matches the result of the study conducted by (Shakya, 2018) who found in his study that the majority of the study subject's gender was female More than half of the patients were females (56.5%). In our opinion Some types of cancer are linked to female hormones due Biological and hormonal differences , such as breast and uterine cancer, which are more common among women , also Women are more likely than men to undergo screening and early detection, leading to more cases being diagnosed, especially at early stages, which increases the incidence rate and In some societies, women live longer than men, making them more susceptible to age-related cancers.

Concerning the educational level, most of the study sample are Illiterate (79) were recorded the highest percentage (24.3%). this finding is in agreement with (Shakya, 2018). found that the highest percentage was related to the educational level they were more than half were illiterate (53.8%). In our opinion there are various reasons ,such as ,Low education is often associated with a lack of knowledge about cancer risk factors, such as smoking, poor nutrition, or chronic exposure to pollutants . and Uneducated individuals often do not seek early screening or are unaware of the importance of early symptoms, leading to late-stage diagnosis.

Regarding to Marital status It is obvious from findings that married patents were taking the majority among the findings. They constituted of (282) of the total number were recorded the highest percentage (86.8%) due to advanced age . Also, married patients were the majority of the study conducted in Germany as linked to the patient's age (Christiansen et al., 2021). They constituted of 174 of the total number were recorded the highest percentage (86.8%). In our opinion It can be explained by several social and demographic factors, and marriage itself is not necessarily a direct cause. Rather, it is because marriage is common in older age groups as people age, the likelihood of developing cancer increases. most married people are older, making them the most vulnerable group to the disease. married people are more stable and tend to seek medical care, which may increase the chances of diagnosis and detection, and they are more likely to be recorded as confirmed cases than unmarried people .and Socioeconomic status, married people are overrepresented in society, especially at older ages, which may simply reflect sample size rather than a causal relationship.

Regarding to Occupation It is obvious from findings that Unemployed patents were taking the majority among the findings. They constituted of (188) of the total number were the highest percentage(57.8%) of them have an unemployed patents . This result agrees with the result conferred by the study done by (Mhamad et al., 2024) Which more participants of the study sa mple conducted in Taiwa were recorded the highest percentage (73.6 %) of them have an unemployed patents. In our opinion reasons for the high rate of cancer patients among the unemployed due environmental exposure and pollution, Many unemployed people live in polluted environments that increase their risk of cancer,Lack of healthcare, unemployment reduces the chances of getting screening and early detection and unemployment causes stress and depression, which weakens the body's immune system.

Regarding to the Income distribution reveals that 175(53.8%) of participants report insufficient income. This result is conversaly to the results of a study conducted in Iraq by (Ali, 2019). which stated that patients(69) (62.2%). do not have sufficient monthly income . In our opinion most cancer patients are of sufficient income because They have greater access to testing and diagnosis than poorer groups, which increases the number of cases .unhealthy lifestyles, such as sedentary lifestyles and processed foods, despite their available income.

Regarding to the findings of the study in table2 presents an overall evaluation of key study parameters among cancer patients. The Self-Efficacy for Managing Chronic Disease 6-item Scale indicates that a majority of patients (66.5%) had high self-efficacy (scores >42), with a mean score of 44.99±13.745, suggesting strong confidence in managing their condition which is close to the results measured by (Karademas et al., 2023) To investigate if breast cancer patients' self-efficacy in managing their disease evolves over time. Thus, participants (N = 404) from four countries were enrolled a few weeks after breast surgery or biopsy; they were recruited. Self-efficacy in managing cancer was evaluated. Most patients expressed high levels of coping self-efficacy, which grew with time. For around 15% of the patients. Moreover, the other findings of this study was The mean scores of self-efficacy were higher than present finding 146.3±22.9 (range: 54 to 190) , Self-efficacious individuals have the ability to be more driven

to overcome obstacles and adopt self-care practices. According to Bandura's measures, a person's perceived self-efficacy plays a crucial role in how well they do since it functions independently of their fundamental abilities. According to Bandura, self-efficacy dictates motivations, emotions, and actions (Masoompour et al., 2017). In our opinion The reason for the high self-efficacy rate among cancer patients is psychological maturity and emotional stability ,at the age 60years and above many individuals reach a level of maturity and psychological stability that enables them to manage anxiety, accept their illness, and adopt positive coping strategies. and they are often surrounded by family support This support is an important factor in enhancing self-efficacy, encouraging patients to adhere to treatment, and interacting positively with the healthcare team.

The Zubrod Performance Status (ZPS), which assesses functional performance and activity levels, indicates that 72.9% of patients had high performance status (≤1.33), meaning they were mostly active. The mean ZPS score of 1.32±1.037 suggests that most patients had good functional capacity. These results conversaly with a study by (Alam et al., 2020) 43.7% of patients had poor performance status. another results by (Al-Mamoori, 2019) reveal more than one third (39.2%) of patients who capable of only limited self care, confined to a bed or chair more than 50% of waking hours.in our opinion the high performance status observed in this study may be due the patients were often in the early stages of cancer, had no comorbidities, and were health-conscious, which helped them detect the disease early. These factors contributed to their energy and daily activity.

According to the effect of Self-Efficacy on Performance Status in cancer Patients in table 3, The study found that self-efficacy has a significant negative effect on performance status (ZPS) ($\beta = -0.798$; $p < .001$). Since lower ZPS scores indicate better functional status, this negative relationship suggests that higher self-efficacy is associated with improved performance status ($R^2 = 0.6367$). These results comes along with a study by (White et al., 2019) Proposed Higher general self-efficacy was linked to better performance outcomes and better symptom management, according to eight studies, As well, higher self-efficacy for managing symptoms was linked to greater functional ability, and higher self-efficacy for managing fatigue was linked to higher physical functional status. in our opinion the study showed that high-performing patients were often in the early stages of cancer, had no comorbidities, and were health-conscious, which helped them detect the disease early. These factors contributed to their energy and daily activity.

According to the Relationship between Self-efficacy, Performance Status and Age in table 4, The correlation analysis indicates that age is negatively correlated with self-efficacy ($r = -0.265$, $p < .01$) suggesting that older patients have lower self-efficacy , these finding is approved by a other study(Shakya, 2018), The self-efficacy was found to decrease with increasing age. This is due to the fact that with increasing age, the patients will have less energy and willpower to take care of themselves, and the disease will also progress. Conversely, other research that was carried out in California, Iran, and South Africa. Compared to younger age groups, elderly cancer patients reported higher levels of self-efficacy ($p <0.05$).This may be because they had previous positive experiences for handling difficult circumstances during their lives; thus, they had a greater sense of self-confidence for managing symptoms related to treatment (Al-Harithy & Wazqar, 2021). Additionally age is positively correlated with performance status ($r = 0.282$, $p < .01$), meaning that older patients tend to have poorer functional status. Since lower ZPS scores indicate better performance, this suggests that aging is associated with declining physical function these finding is supported by a study done by (Al-Mamoori, 2019). the age of patients has been high influencing on their performance status at(p-value <0.01).in our opinion ,The negative relationship between age and self-efficacy may be attributed to the psychological and physical changes that accompany aging. As people age, confidence in their ability to cope with health challenges, especially complex conditions such as cancer, may decrease due to declining physical function or previous experiences with the disease .Conversely, the positive relationship between age and performance status may be linked to older patients' maturation in coping with the disease and their possession of more effective coping strategies as a result of accumulated life experiences, which improves their assessment of their functional status or daily performance despite the disease.

According to Statistical variense in Self-efficacy in Patients with Cancer between f Socio-demographic

group Characteristics in table 5 The analysis reveals significant differences in self-efficacy among cancer patients based on gender ($\chi^2 = 4.570$, $p = .033$), education level ($\chi^2 = 24.214$, $p = .001$), and monthly income ($\chi^2 = 12.233$, $p = .002$). Males, those with higher education, employed or retired individuals, and those with sufficient income tend to have higher self-efficacy. this finding is agreement with the A study conducted in Saudi Arabia (SA) on cancer patients, found significant effects of, gender, education level on self-efficacy, Women reported a lower average degree than men for positive attitude, and education level ($r = 0.28$, $p < .01$) was correlated significantly with making hard decisions. Researchers also confirmed other studies that state found that patients who were male ($p < .05$), had a college education ($p < .001$) had significantly higher self-efficacy scores (White et al., 2019) in our opinion males demonstrate higher self-efficacy due to socialization that fosters independence and self-confidence, while women may face social constraints that hinder the development of this competence , additionaly education provides individuals with skills and knowledge that enhance their confidence in their ability to deal with challenges.

According to Statistical Differences in Self-efficacy in Patients with Cancer between Groups of Socio-demographic Characteristics in table 5 based on occupation and marital status, The analysis reveals significant differences in self-efficacy among cancer patients based on occupation ($\chi^2 = 9.248$, $p = .026$) However, no significant differences were found based on marital status ($\chi^2 = 3.443$, $p = .238$).these finding disagreement with study applied by (Al-Harithy & Wazqar, 2021) discovered that self-efficacy was substantially related to marital status and that participants without jobs scored higher on average when making decisions than participants who were working or retired ($F = 3.17$, $p = .027$). One study showed that being married was substantially associated with better levels of self-efficacy; a happy marriage can increase self-efficacy in managing one's health and cultivate a sense of responsibility (Al-Harithy & Wazqar, 2021).

In our opinion employees have higher self-efficacy due to their exposure to successful professional experiences and challenges that boost self-confidence, in addition to support and interaction in the work place. and marital status does not clearly affect self-efficacy because feelings of competence depend more on individual factors such as education and experience, rather than social status.

According to Statistical Differences in Self-efficacy in Patients with Cancer between Groups of Socio-demographic Characteristics in table 5 based on based on monthly income The analysis reveals significant differences in self-efficacy among cancer patients based on monthly income ($\chi^2 = 12.233$, $p = .002$). these finding is agreement with study applied by (Shakya, 2018) that found Self-efficacy have significant positive correlation with monthly family income. In our opinion ,a sufficient monthly income is positively associated with self-efficacy because it reduces psychological stress, provides economic security, and provides access to supportive resources, enhancing an individual's sense of control and achievement.

According to Statistical Differences in Performance Status (ZPS) in Patients with Cancer between Groups of Socio-demographic Characteristics in table 6 found significant differences in performance status (ZPS) among cancer patients based on education level ($\chi^2 = 14.412$, $p = .013$), occupation ($\chi^2 = 9.223$, $p = .026$), and monthly income ($\chi^2 = 8.803$, $p = .012$). Patients with higher education, employment, and sufficient income tend to have better performance status (lower ZPS scores). This result is agreement with the study conducted by(Al-Maamouri , 2019) found in this study were The patients marital status, education level, occupation and economic status has been significant with their performance status at p-value <0.05. in our opinion , a working person is more active and energetic, which helps them maintain their physical and mental abilities. a sufficient monthly income enables them to meet their health and living needs, such as access to treatment or proper nutrition, which improves their daily performance. As for educational level, it gives the individual a better understanding of their health condition and the ability to correctly follow medical advice, which contributes to improving their physical and psychological condition, thus enhancing their efficiency in performing their daily activities.

According to Statistical Differences in Performance Status (ZPS) in Patients with Cancer between Groups of Socio-demographic Characteristics in table 6 based on gender and marital status did not show significant differences. In our opinion The lack of association between gender and marital status with performance

status in cancer patients is explained by the fact that the influence of disease and health factors is stronger than social or individual differences, as performance focuses on physical and psychological capacity affected by treatment and symptoms, rather than whether the patient is male or female, married or unmarried, which makes these factors less influential on performance status.

In conclusion, The greater part of the sample of this study patients are at age ≥60 years . married female, Illiterate, and had enough income ,the majority of patients regarding Self-Efficacy Scale had high self-efficacy levels and Most of patients regarding Zubrod Performance Status (ZPS) Scale were high level ,Most of patients regarding age is negatively correlated with self-efficacy Additionally, age is positively correlated with performance status, additionally gender , education level , occupation and monthly income had significant differences in self-efficacy among cancer patients furthermore , education level occupation , and monthly income had significant differences in performance status (ZPS) among cancer patients and found There was significant negative influence of self-efficacy on performance status (ZPS) Since lower ZPS scores indicate better functional status among patients .

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Acknowledgments

The authors express their gratitude and appreciation to all participants.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Authors' Contributions

All authors equally contribute to this study.

References

Abbass, Z. (2024). Self-efficacy as a Predictor of Self-Management Capacity in Cancer Patients. *Academia Open*, *9*(1), 10-21070. https://doi.org/10.21070/acopen.9.2024.10305

Al-Harithy, F. M., & Wazqar, D. Y. (2021). Factors associated with self-management practices and self-efficacy among adults with cancer under treatment in Saudi Arabia. *J Clin Nurs*, *30*(21-22), 3301-3313. https://doi.org/10.1111/jocn.15843

Al-Mamoori, H. M. K. (2019). *Assessment of Physical Problems on Performance Status to Cancer Patients Undergoing Chemotherapy at Al-Hilla City* [MSc Thesis, College of Nursing, Babylon University]. https://www.researchgate.net/publication/366395105_Assessment_of_Physical_Problems_Related_to_Chemotherapy_among_Patients_with_Cancer_in_Al-Najaf_City_Assessment_of_Physical_Problems_Related_to_Chemotherapy_among_Patients_with_Cancer_in_Al-Najaf_City

Alam, M. M., Rahman, T., Afroz, Z., Chakraborty, P. A., Wahab, A., Zaman, S., & Hawlader, M. D. H. (2020). Quality of Life (QoL) of cancer patients and its association with nutritional and performance status: A pilot study. *Heliyon*, *6*(10), e05250. https://doi.org/10.1016/j.heliyon.2020.e05250

Ali, W. I. S. (2019). *Fatigue and its Relationship with Treatment Acceptance among Cancerous Patients at Kirkuk Oncology and Hematology Center in Kirkuk City* [MSc Thesis, College of Nursing, Babylon University]. https://jcs.tbzmed.ac.ir/PDF/jcs-10-210.pdf

Bourgeois, A., Horrill, T., Mollison, A., Stringer, E., Lambert, L. K., & Stajduhar, K. (2024). Barriers to cancer treatment for people experiencing socioeconomic disadvantage in high-income countries: a scoping review. *BMC Health Serv Res*, *24*(1), 670. https://doi.org/10.1186/s12913-024-11129-2

Chandraprasad, M. S., Dey, A., & Swamy, M. K. (2022). Introduction to cancer and treatment approaches. In *Paclitaxel* (Vol. 1, pp. 1-27). Academic Press. https://doi.org/10.1016/B978-0-323-90951-8.00010-2

Christiansen, N., Walter, S., Zomorodbakhsch, B., Sartakhti, E. A., & Hübner, J. (2021). Assessment of Self-Efficacy as a Way to Help Identify Cancer Patients Who Might Benefit from Self-Help Group Attendance? *Cancer Invest*, *39*(2), 133-143. https://doi.org/10.1080/07357907.2020.1867996

Fang, R. (2020). *Diabetes Self-Efficacy: Longitudinal Relationships With Diabetes Overall Self-Management*,

Medication Non-Adherence, Diabetes Distress, and Glycemic Control in Adults With Type 2 Diabetes [Doctoral dissertation, Yeshiva University]. https://search.proquest.com/openview/0be1682cf0a072d7b6ce93ba493bf015/1?pq-origsite=gscholar&cbl=18750&diss=y

George, M., Smith, A., Sabesan, S., & Ranmuthugala, G. (2021). Physical Comorbidities and Their Relationship with Cancer Treatment and Its Outcomes in Older Adult Populations: Systematic Review. *Jmir Cancer*, *7*(4), e26425. https://doi.org/10.2196/26425

Hardcastle, S. J., Maxwell-Smith, C., & Hagger, M. S. (2021). Predicting physical activity change in cancer survivors: an application of the Health Action Process Approach. *Journal of Cancer Survivorship*, 1-8. https://doi.org/10.1007/s11764-021-01107-6

Hashim, S. H., & Khalil, M. S. (2018). Self-efficacy, emotional intelligence, and quality of life amongst cancer patients. *J Psychol Clin Psychiatry*, *9*(5), 450. https://doi.org/10.15406/jpcpy.2018.09.00569

Hashim, S. S. (2021). *Patient activation measure associated with physical and mental symptoms experienced by patients undergoing hemodialysis in Al-Hilla Teaching Hospitals* [MSc Thesis, College of Nursing, Babylon University]. https://pmc.ncbi.nlm.nih.gov/articles/PMC8638382/

Karademas, E. C., Simos, P., Pat-Horenczyk, R., Roziner, I., Mazzocco, K., & Sousa, B. (2023). The Interplay Between Trait Resilience and Coping Self-efficacy in Patients with Breast Cancer: An International Study. *J Clin Psychol Med Settings*, *30*(1), 119-128. https://doi.org/10.1007/s10880-022-09872-x

Kurtz, M. E., Kurtz, J. C., Given, C. W., & Given, B. A. (2008). Patient optimism and mastery-do they play a role in cancer patients' management of pain and fatigue? *J Pain Symptom Manage*, *36*(1), 1-10. https://doi.org/10.1016/j.jpainsymman.2007.08.010

Ma, G., Zhou, C., Han, Z., Mu, T., & Ma, X. (2024). Social support and physical literacy in young and middle-aged patients with hypertension: the mediating effects of sense of coherence and self-efficacy. *BMC psychiatry*, *24*(1), 494. https://doi.org/10.1186/s12888-024-05935-5

Martinez-Calderon, J., Zamora-Campos, C., Navarro-Ledesma, S., & Luque-Suarez, A. (2018). The Role of Self-Efficacy on the Prognosis of Chronic Musculoskeletal Pain: A Systematic Review. *J Pain*, *19*(1), 10-34. https://doi.org/10.1016/j.jpain.2017.08.008

Masoompour, M., Tirgari, B., & Ghazanfari, Z. (2017). The relationship between health literacy, self-efficacy, and self-care behaviors in diabetic patients. *Evid Based Care*, *7*(3), 17-25. https://ebcj.mums.ac.ir/http://ebcj.mums.ac.ir/article_9378.html

Merluzzi, T. V., Philip, E. J., Heitzmann Ruhf, C. A., Liu, H., Yang, M., & Conley, C. C. (2018). Self-efficacy for coping with cancer: Revision of the Cancer Behavior Inventory (Version 3.0). *Psychol Assess*, *30*(4), 486-499. https://doi.org/10.1037/pas0000483

Mhamad, H. J., Najmadden, Z. B., Hama Salih, K. H., Hama, D. A., Abdullah, H. O., Hasan, K. M., Kareem, H. O., Mohammed, B. A., Fattah, F. H., Abdalla, B. A., Kakamad, F. H., & Mohammed, S. H. (2024). Prevalence and predictive factors associated with stunting in preschool children in a governorate of Iraq: a community-based cross-sectional study. *Front Nutr*, *11*, 1322625. https://doi.org/10.3389/fnut.2024.1322625

Roca, F., Lang, P. O., & Chassagne, P. (2019). Chronic neurological disorders and related comorbidities: Role of age-associated physiological changes. In *Handb Clin Neurol* (Vol. 167, pp. 105-122). https://doi.org/10.1016/B978-0-12-804766-8.00007-8

Shakya, D. (2018). Self-efficacy among patients with chronic diseases and its associated factors. *J Kathmandu Med Coll*, *7*(3), 82-88. https://doi.org/10.3126/jkmc.v7i3.22675

Simcock, R., & Wright, J. (2020). Beyond performance status. *Clinical Oncology*, *32*(9), 553-561. https://doi.org/10.1016/j.clon.2020.06.016

Wang, L., Luo, J., Li, Y., Zhou, Y., & Wang, W. (2022). Social support, anxiety, and depression in patients with prostate cancer: complete mediation of self-efficacy. *Support Care Cancer*, *30*(8), 6851-6856. https://doi.org/10.1007/s00520-022-07065-8

White, L. L., Cohen, M. Z., Berger, A. M., Kupzyk, K. A., & Bierman, P. J. (2019). Self-Efficacy for Management of Symptoms and Symptom Distress in Adults With Cancer: An Integrative Review. *Oncology Nursing Forum*, *46*(1). https://search.proquest.com/openview/fbb6136a8c7fc3a04f671e7c10a7b993/1?pq-origsite=gscholar&cbl=37213