

ORIGINAL RESEARCH ARTICLE

Psychotherapists' perspectives on the quality of psychological services for cancer patients in Riyadh: A predictive study

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(This article belongs to the *Special Issue: Nursing Care in Cancer*)**Abstract****Introduction:** Psychological services play a vital role in supporting cancer patients, yet their quality is influenced by provider-related factors that remain underexplored.**Objective:** The objective of this study was to predict the quality of psychological services provided to cancer patients in Riyadh from the perspective of psychotherapists and to assess the predictive value of key variables within the target group.**Methods:** A questionnaire assessing communication skills scale and psychotherapist competence was completed by 329 psychotherapists.**Results:** Our findings revealed that the highest mean score was observed for the empathy dimension (54.20), whereas respect and authenticity recorded the lowest mean score (19.28). The overall quality of psychological services had a mean score of 174.88 ± 9.53 . Regarding the psychotherapist self-efficacy scale, clinical competence recorded the highest mean (20.41), whereas influence regulation had the lowest mean score (7.95). The total score for psychotherapist competence was 79.33. Predictive analysis revealed that the workplace and academic level of psychotherapists were statistically significant predictors of service quality ($p < 0.05$). The independent variables accounted for 41% of the variance in psychotherapist competence and 16% of the variance in communication skills with patients, indicating an overall weak predictive relationship.**Conclusion:** Clinical practice implications should be considered. The identified predictors—communication skills, workplace, and academic level—may guide future efforts to enhance therapeutic approaches. Focusing on improving empathy and emotional regulation could further strengthen the quality of psychological care for cancer patients. Further studies are encouraged to translate these findings into practical clinical strategies.**Keywords:** Psychological services; Cancer patients; Riyadh; psychotherapists; Predictive study***Corresponding author:**Yahya Khatatbeh
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doi: 10.36922/EJMO025110054**Received:** March 13, 2025**1st revised:** April 19, 2025**2nd revised:** April 29, 2025**Accepted:** May 12, 2025**Published online:** June 20, 2025**Copyright:** © 2025 Author(s). This is an Open-Access article distributed under the terms of the Creative Commons Attribution License, permitting distribution, and reproduction in any medium, provided the original work is properly cited.**Publisher's Note:** AccScience Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.**1. Introduction**Cancer is among the leading causes of death worldwide, accounting for nearly 10 million deaths in 2020.¹ In Spain, 300,000 new cancer cases and more than 110,000 deaths were recorded in 2020.² Research indicates that 35 – 80% of cancer patients are in psychological distress, with 10 – 40% of patients experiencing anxiety and depression,³

necessitating high-quality psychological services to enhance their well-being and adherence to treatment.⁴ The synergy between psychotherapist-patient communication and psychotherapist competence is also pivotal. One study found that interventions combining communication training (e.g., delivering bad news) with competency-building units (e.g., symptom management) resulted in 53% greater improvement in patient-reported outcomes standardized mean difference.⁵ Another study reported that psychotherapist competence in relationships ($\alpha = 0.88$) and clarity of communication ($\alpha = 0.82$) together explained 68% of the variance in patient confidence ($R^2 = 0.68$), indicating a substantial effect.⁶ The quality of psychological services for cancer patients on their emotional resilience, coping mechanisms, and quality of life reduces symptoms of anxiety and depression by about 30 – 50%. However, the variations in service delivery and accessibility, along with psychotherapists' feedback, can influence outcomes, necessitating predictive models to assess and improve service quality.⁷ Studies have highlighted that factors, such as therapeutic alliance, intervention methods, and access to care, significantly affect the quality of service.⁸ In a study examining web-based therapy for cancer patients, 65% of psychotherapists considered patient engagement and psychotherapist response as key indicators of quality of care.⁹ In addition, psychological support contributed to a 40% improvement in the quality of life of cancer patients, with higher psychotherapist competence linked to better patient adaptation. Another study emphasized the importance of personalized psychosocial interventions, where patients receiving tailored treatment reported 30% higher satisfaction levels compared to those receiving general mental health support.¹⁰ This highlights the need to explore key predictors of quality psychological services for cancer patients from the perspective of psychotherapists, aiming to strengthen mental health interventions in oncology care. Similarly, a review of 29 eligible articles—including 14 qualitative, 11 quantitative, and 4 mixed-method articles—identified multiple influencing factors on psychological service quality: patient-related factors, health professional factors, therapeutic relationships, treatment characteristics, organizational and systemic factors, and care models.⁸ Psychotherapists play a crucial role in delivering integrated psychological care, encompassing assessment, diagnosis, therapeutic intervention, and ongoing psychological support. Their role is particularly important for patients with chronic diseases (e.g., cancer), who face complex psychological and emotional challenges. Through effective communication, professional empathy, and high self-efficacy in handling sensitive cases, psychotherapists contribute to significantly improving patients' quality of life. Evaluating the quality of

psychological services provided in this context is necessary for identifying factors to enhance and advance professional performance in specialized psychiatric care. The PALLI-COM study, a randomized controlled trial on the effects of communication training for oncologists, aimed to improve early discussions about palliative care and end-of-life issues. The training consisted of two 90-min sessions. Results demonstrated significant improvements in communication skills, including emotional engagement, empathy, and addressing end-of-life topics. The study suggests that this brief training can be effectively integrated into routine oncology education to improve patient care.¹¹

Recent reviews and studies have highlighted the importance of therapeutic alliance and effective communication between psychotherapists and cancer patients in improving psychiatric care. One study found that patients evaluated their relationship with psychotherapists positively, underscoring the importance of this bond.¹² Another survey identified core competencies for psychotherapists in palliative care, most notably the ability to coordinate care between disciplines.¹³ In addition, research demonstrated that psychological interventions significantly improve the quality of life for cancer patients through diverse approaches.¹⁴ Furthermore, a study on breast cancer care revealed that doctors who exhibit greater empathy promote better mental health outcomes in patients. These findings suggest that empathetic communication by healthcare providers is key to reducing patients' uncertainty about their diagnosis and treatment, positioning caregivers as key contributors to the psychological well-being of cancer patients.¹⁵ Therapeutic alliance plays a pivotal role in the success of psychological interventions for cancer patients, accounting for up to 35% of the effectiveness of mindfulness-based cognitive therapy.¹⁶ Psychotherapist competence and patient commitment to treatment affect treatment outcomes by 20 – 30%.¹⁷ Recent studies indicate that machine learning models can assess psychotherapists' communication skills with over 80% accuracy in predicting psychotherapy outcomes.¹⁸ Furthermore, psychotherapist competence has been reported to reduce psychological distress and improve well-being by 40%, whereas deviation from evidence-based therapeutic practices leads to a 15% reduction in treatment effectiveness.¹⁹

Telepsychology has demonstrated therapeutic outcomes comparable to face-to-face therapy, making it an effective tool in cancer care.¹⁸ Psychotherapists' interpersonal communication skills are associated with greater patient resilience and increased treatment adherence, reducing dropout rates by 20%.¹⁷ The therapeutic relationship is one of the strongest predictors of therapeutic success, accounting for up to 50% of treatment outcomes.²⁰ In

addition, social support and communication effectiveness account for 45% of the variation in patients' well-being scores.²¹

Evidence-based psychological training programs improve psychotherapist competence and patient satisfaction by 30%.²² Group therapy models have been reported to reduce psychological distress by 25%.²³ Training caregivers in psychological resilience and empathy further enhances mental health and reduces anxiety by 30%.²⁴ In addition, non-verbal communication skills contribute to a 20% increase in treatment effectiveness.²⁵ Artificial intelligence-powered supervision emerges as an effective tool to improve psychotherapist performance and reduce bias in treatment outcomes.¹⁹ Mindfulness-based interventions integrated with psychotherapy significantly improve the therapeutic relationship and reduce patient stress.²⁶ Mindfulness has also demonstrated protective effects for at-risk groups, such as individuals with diabetes and hypertension, by enhancing emotional regulation and reducing stress. Diabetes affects about 1 in 11 adults worldwide, with a rising prevalence—from 529 million patients in 2021 to approximately 1.31 billion in 2050. In Italy, 5.9% of the population is diabetic, with a higher prevalence among older adults and those in southern regions. Practices such as yoga and mindfulness may provide valuable support for diabetic patients, especially in a stressful context such as the COVID-19 pandemic.²⁷

Despite the growing interest in psychiatric oncology, there remains a significant gap in the scientific literature regarding the indicators of psychological service quality for cancer patients from the perspective of psychotherapists. Recent studies tend to focus on patient outcomes, treatment satisfaction, or the challenges faced by patients during treatment while often overlooking the insights and experiences of psychotherapists themselves. In addition, studies tend to integrate psychological, organizational, and interactive factors that may affect service quality and hinder the development of comprehensive, evidence-based models essential for guiding trainees and practitioners and improving policies in cancer care settings. Understanding these perspectives is critical to identifying care gaps, ensuring the consistency of treatment approaches, and promoting patient-centered practices that address emotional, cognitive, and behavioral needs during cancer treatment. Key service quality predictors—such as psychotherapist competence, patient engagement, and institutional support—are vital for enhancing training programs and informing policy decisions aimed at improving patient outcomes.²⁸ In addition, highlights the importance of integrating psychological expertise into multidisciplinary oncology teams while emphasizing the

importance of mental health in comprehensive oncology care.²⁹

Despite the growing recognition of the psychological burden facing cancer patients and the increasing role of psychiatric services in oncology, most current studies have focused primarily on patient experiences and outcomes. In contrast, limited attention has been given to the perspectives of mental health professionals providing these services³⁰ Moreover, there is a notable lack of empirical research examining predictors of psychological service quality, particularly within Arab or Middle Eastern contexts. This gap is significant, as structural, cultural, and institutional factors may differ significantly from Western healthcare models.

This gap highlights the need for research that explores the quality of services from the perspective of psychotherapists directly involved in caregiving. Addressing this gap is critical for informing policy development, enhancing vocational training, and improving mental health interventions in oncology care. Accordingly, this study aims to explore how key provider-related variables—such as communication skills and psychotherapist effectiveness—affect the quality of psychological services provided to cancer patients in Riyadh. The main objectives are to:

- (i) Assess the quality of psychological services provided to cancer patients from the perspective of psychotherapists;
- (ii) Identify key factors that predict the quality of these services;
- (iii) Analyze the availability of human and material resources affecting the quality of psychological services; and
- (iv) Examine the impact of the professional experience and training on the psychotherapists' assessments of the quality of psychological services.

Specifically, the study investigates the relationship between psychotherapists' communication skills, self-perceived clinical effectiveness, and their assessment of service quality. Based on the literature and the theoretical framework, the following hypotheses were formulated:

- (i) There are statistically significant differences in the mean scores and standard deviations of participants' responses on the Psychotherapist's Communication Skills Scale (CSS).
- (ii) There are statistically significant differences in the mean scores and standard deviations of participants' responses on the Psychotherapist's Self-Efficacy Scale.
- (iii) Professional experience, specialization, age, academic level, and workplace significantly predict the quality of psychological services provided to cancer patients, as reflected in the psychotherapist's competence and communication skills.

2. Materials and methods

2.1. Study design

The present study used a descriptive (comparative) approach to assess the quality of psychological services provided to cancer patients from the perspective of psychotherapists. Their opinions were gathered using two standardized tools: the Psychotherapist's CSS and the Psychotherapist's Self-Efficacy Scale. The study aimed to predict the quality of these services based on psychotherapists' assessments and to determine the levels of these variables within the target group, without the need for long-term tracking that could delay timely data collection.

The reporting of this predictive study adhered to transparent reporting of a multivariable prediction model for individual prognosis or diagnosis (TRIPOD) guidelines to ensure clarity, transparency, and completeness in presenting the study methods and findings.³¹

The study sample consisted of licensed psychotherapists working in various psychiatric service centers, including mental health clinics, psychological counseling centers, and hospitals that provide psychiatric care to individuals with chronic diseases, especially cancer patients. The participants were mainly selected from a group of graduate students enrolled in a graduate psychology program at a Saudi university, most of whom were practicing in relevant clinical or consulting settings. This group was selected based on their direct involvement with providing psychological services to patient groups with chronic diseases, including cancer. A random sample of qualified psychotherapists was invited to participate in the study through an online questionnaire distributed via Google Forms. Before starting the questionnaire, participants were given a clear explanation of the study objectives and the variables assessed. The questionnaire consisted of closed questions with clear answer options to ensure clarity and ease of understanding. The questionnaire was logically divided into sections, starting with demographic information, followed by measures assessing professional communication skills and self-therapist competence. A total of 381 responses were collected; however, only 329 responses were included in the final analysis after excluding incomplete entries. The participants met the following inclusion criteria: (i) agreement to participate in the study, (ii) specialization in psychological sciences and provision of psychological services at the centers involved in the study, and (iii) reading and understanding the study objectives and instructions before completing the questionnaire.

This study was conducted in accordance with ethical standards regulating human research. Before data collection,

ethical approval was obtained from the Scientific Ethics Committee at the university (approval no. 16/53253) on July 17, 2024. Informed consent was obtained electronically before participants accessed the questionnaire. No identifying information was collected, and the data was used solely for academic research purposes.

2.2. Study tools

The main variables of the study were derived from the participants' responses on two standardized tools: the Psychotherapist's CSS and the Psychotherapist's Self-Efficacy Scale. Each scale consists of multiple subdimensions, with scores calculated as the average of responses for the items in each subdimension. Reverse-coded items were adjusted before calculation to ensure consistent response orientation. The mean value was used instead of the total, as the number of items varied between dimensions. Variables were treated as continuous, enabling appropriate statistical analyses such as regression. This approach preserved the original structure of the scales and ensured an accurate representation of the study concepts. To ensure the validity of the study tools and their proper use in the local context, the initial version of the questionnaire was presented to five experts in clinical psychology, measurement, and educational evaluation to assess the relevance, clarity, and cultural and linguistic appropriateness of the items. Based on their feedback, necessary adjustments were made to the language and style to enhance clarity and participant comprehension. The study tools were then tested on a pilot sample of 30 participants from the same study population; their data were excluded from the final analysis. This step ensured the questionnaire was clear, unambiguous, and not repetitive while also assessing initial psychometric properties.

The questionnaire begins by collecting basic information about the participant, including gender, workplace, specialization, years of professional experience, and academic level. The questionnaire proceeded with evaluating the communication skills and self-efficacy of the participants, structured into three main sections: (1) Demographic information, which includes gender, workplace, specialization, years of professional experience, and academic level; (2) the Health Professionals (HP) CSS, assessing four subdimensions—Informative Communication, Empathy, Respect and Authenticity, and Social Skills; and (3) the therapist self-efficacy scale (T-SES) includes six core dimensions: communicative effectiveness, clinical competence, intrapsychic competence, relational competence, affect regulation, and diagnostic skills. The questionnaire proceeded with evaluating the communication skills and self-efficacy of the participants.

2.2.1. Psychotherapist's CSS

A section of the questionnaire was developed based on the scale previously described,³² consisting of 42 elements, with half of them worded in reverse. The scale uses six response options with linguistic indicators: 1 (never/kind of); 2 (occasionally); 3 (sometimes); 4 (usually); 5 (a lot); and 6 (many times). The complete CSS (HP-CSS), including all 42 items has been provided in the appendix section. The scale consists of four basic dimensions: (i) media communication, comprising 12 elements (3, 6, 11, 13, 16, 18, 20, 27, 30, 38, 39, and 42) that reflect the way healthcare professionals obtain and present information within their clinical interactions with patients; (ii) empathy, comprising 13 items (4, 5, 12, 14, 17, 21, 22, 23, 28, 29, 36, 37, and 41) that reflect the ability of healthcare professionals to understand patients' feelings and demonstrate empathy through behaviors such as active listening and empathetic responses; (iii) respect and authenticity, with five items (2, 10, 26, 33, and 34) that assess the respect, authenticity, and conformity displayed by healthcare professionals in their clinical interactions with patients; and (iv) social skills, with 12 items (1, 7, 8, 9, 15, 19, 24, 25, 31, 32, 35, and 40) that reflect the ability of health professionals to be assertive or demonstrate skilled social behaviors in their clinical interactions with patients. The validity and reliability of the scale were thoroughly assessed, where the comparative compatibility index (CFI) was calculated to be 0.95, reflecting a high level of internal consistency. An exploratory factor analysis (EFA) was conducted to verify the general structure of the scale, yielding a Kaiser–Meyer–Olkin (KMO) value of 0.89, indicating sample adequacy for factor analysis. Bartlett's test of sphericity revealed statistical significance (Chi-square [χ^2] = 4156.23; Degrees of freedom [df] = 861; $p < 0.001$), confirming data suitability for factor analysis. Confirmatory factor analysis (CFA) demonstrated good fit indices (CFI = 0.95; Tucker–Lewis index [TLI] = 0.94; and root mean square error of approximation [RMSEA] = 0.05), indicating strong structural validity. Cronbach's alpha coefficients demonstrated high internal consistency across dimensions: Media communication ($\alpha = 0.84$), empathy ($\alpha = 0.87$), respect and authenticity ($\alpha = 0.80$), social skills ($\alpha = 0.86$), and overall scale reliability ($\alpha = 0.88$).

2.2.2. Psychotherapist's self-efficacy scale

Another part of the questionnaire was developed based on the scale previously described³³ to assess the professional self-efficacy of a psychotherapist. The scale consists of 21 elements and six dimensions: (i) communicative effectiveness, (ii) clinical competence, (iii) psychological competence, (iv) relational competence, (v) influence regulation, and (vi) diagnostic skills. The scale demonstrates a clear single-factor structure, effectively

measuring the self-efficacy of the psychotherapist, as confirmed by both exploratory and confirmatory factor analyses. The overall scale structure was verified through EFA, yielding a KMO value of 0.91. In addition, Bartlett's test indicated statistical significance ($\chi^2 = 2941.67$; $df = 210$; $p < 0.001$). CFA also revealed high model quality indicators (CFI = 0.96; TLI = 0.95; RMSEA = 0.04), emphasizing a strong single-factor structure of the scale. In terms of stability, Cronbach's alpha coefficients for the scale ranged between 0.83 and 0.89: communicative effectiveness ($\alpha = 0.85$), clinical competence ($\alpha = 0.88$), psychological competence ($\alpha = 0.86$), relational competence ($\alpha = 0.89$), influence regulation ($\alpha = 0.83$), and diagnostic skills ($\alpha = 0.87$), with overall scale reliability of $\alpha = 0.92$; this suggests high reliability and accuracy of the scale.

2.3. Statistical analysis

The study data were analyzed using the statistical analysis software Statistical Package for the Social Sciences version 27. The analysis began by assessing data distribution, revealing deviations from normality in some variables, which necessitated the use of nonparametric tests. Descriptive statistics (mean, standard deviations, frequencies, and percentages) were computed for all study variables and demographic data. Scale scores are presented as mean \pm standard deviation. Spearman's rho correlation test was used to examine the relationship between the underlying variables, and multiple regression analysis assessed the extent to which communication skills and self-efficacy predicted the quality of psychological services. The analyses were directly linked to the three hypotheses of the study, using a statistical significance level of $\alpha \leq 0.05$. In addition, analysis of variance (ANOVA) was used to test for statistically significant differences in mean scores across groups based on demographic characteristics (e.g., workplace, academic level). The assumptions for ANOVA—*independence of observations*, *homogeneity of variances* (Levene's test), and *approximately normally distributed residuals*—were assessed before interpretation. Furthermore, various analytical models were applied depending on the nature of each hypothesis: correlational models for relational hypotheses, regression models for predictive hypotheses, and group comparison models (e.g., ANOVA) for testing differences across categorical variables. All analyses were conducted using a statistical significance threshold of $\alpha \leq 0.05$.

3. Results

The characteristics of the study participants are displayed in Table 1. The study sample was relatively balanced between genders, with 161 (48.9%) male participants and 168 (51.1%) female participants. The workplace of the

Table 1. Characteristics of study participants

Characteristic	Frequency	Percentage
Gender		
Male	161	48.9
Female	168	51.1
Workplace		
Psychiatric clinic	131	39.8
Hospital	106	32.2
School and rehabilitation centers	92	28.0
Specialization		
Clinical psychology	178	54.1
Psychological counseling	75	22.8
Mental health	76	23.1
Experience		
<5 years	164	49.8
5 – 10 years	69	21.0
More than 10 years	96	29.2
Academic degree		
Bachelor	207	62.9
Postgraduate	122	37.1

participants varied as follows: 131 (39.8%) participants worked in psychiatric clinics, 106 (32.2%) in hospitals, and 92 (28.0%) in schools and rehabilitation centers. The distribution of participants according to their specializations is as follows: 178 (54.1%) participants specialized in clinical psychology, 75 (22.8%) in psychological counseling, and 76 (23.1%) in mental health. Among them, 164 (49.8%) participants had <5 years of experience, 69 (21.0%) had 5 – 10 years of experience, and 96 (29.2%) had more than 10 years of experience. In addition, 207 participants received a bachelor's degree (62.9%), whereas 122 (37.1%) participants had a postgraduate degree.

From the CSS results (Table 2), the highest mean score was observed for empathy (54.1976 ± 5.41907), indicating that participants have a high level of ability to understand and respond to patients' emotions. The second highest mean score was social skills (53.8207 ± 3.46429), suggesting good interaction and positive relationships with patients. In contrast, respect and authenticity had the lowest mean score (19.2827 ± 1.75540), indicating consistent responses but also highlighting the need to strengthen this dimension. The overall score of the scale was 174.8754 ± 9.53202; this reflects a positive general assessment of communication skills, with a minor variation among the participants.

From the self-efficacy scale results (Table 3), the highest mean score was observed for clinical competence (20.4073 ± 2.27488), indicating that psychotherapists possess strong

Table 2. Participants' communication skills scale scores across different dimensions

Dimension	Score
Media communication	47.5745±6.96078
Empathy	54.1976±5.41907
Respect and authenticity	19.2827±1.75540
Social skills	53.8207±3.46429
Total	174.8754±9.53202

Note: Scores are presented as mean±standard deviation.

Table 3. Participants' self-efficacy scale scores across different dimensions

Dimension	Score
Relational competence	14.0304±3.13015
Communicative effectiveness	16.2340±3.49345
Psychological competence	12.5046±1.97565
Clinical competence	20.4073±2.27488
Influence regulation	7.9514±0.94872
Diagnostic skills	8.2036±2.28286
Total	79.3313±6.24082

Note: Scores are presented as mean±standard deviation.

clinical skills; the standard deviation implies limited variations in participant response. The second highest mean score was obtained for communicative effectiveness (16.2340 ± 3.49345), thus reflecting the importance of effective communication for treatment success; the standard deviation implies a relative variation in this domain between psychotherapists. The lowest mean score was reported for diagnostic skills (8.2036 ± 2.28286), prompting further improvements compared to the other dimensions. The overall score of the self-efficacy scale was 79.3313 ± 6.24092, reflecting a good level of efficacy with some variation among the participants.

Table 4 evaluates the prediction of psychological service quality from the psychotherapists' perspectives. The TRIPOD checklist was also reviewed to verify that all essential components for predictive model reporting were adequately addressed in the presentation of results. Psychotherapist competence displayed a coefficient R of 0.126, which indicates a weak correlation, and a specific correlation coefficient, R² of 0.016, which corroborates the observed variance between the dependent and independent variables. The high standard error (1.050) and F-statistic (1.382) confirmed that the model is weak. The low R²-value (0.016) suggests that the independent variables have poor predictive ability, and the high p-value (0.388) indicates non-significance. Overall, the model (psychotherapist competence) is not applicable

Table 4. Predicting psychotherapists' perceptions of psychological service quality for cancer patients

Domains	Model summary		ANOVA			Regression					
	R	R ²	F	DF	Sig.	Independent variable	B	Standard error	β	t	p-value
Psychotherapist competence	0.126	0.016	1.050	5	0.388	(Constant)	79.476	2.164	-	36.724	<0.001
						Gender	0.981	0.717	0.079	1.369	0.172
						Workplace	-0.233	0.437	-0.031	-0.534	0.594
						Years of experience	-0.496	0.404	-0.069	-1.229	0.220
						Specialization	0.142	0.435	0.019	0.326	0.745
						Academic level	-392	0.734	-0.030	-0.534	0.594
Communication skills	0.202	0.041	2.738	5	0.019	(Constant)	177.534	3.264	-	54.397	<0.001
						Gender	0.583	1.081	0.031	0.539	0.590
						Workplace	-1.658	0.659	-142	-2.515	0.012
						Years of experience	0.834	0.609	0.076	1.369	0.172
						Specialization	0.780	0.657	0.067	1.187	236
						Academic level	-2.359	1.106	-120	-2.132	0.034

Note: (Constant) refers to intercept.

Abbreviations: R²: Coefficient of determination; F: F-statistic; DF: Degrees of freedom; Sig.: Significance level (p-value), B: Unstandardized regression coefficient; ANOVA: Analysis of variance.

for predicting psychological service quality. In addition, the predictors are not statistically significant (all $p > 0.05$); the predictors do not significantly affect the dependent variable. The low beta (β)-values indicate weak relationships between the predictors and the dependent variable. Similarly, communication skills displayed a coefficient R of 0.202, which indicates a weak correlation, and a specified correlation coefficient of 0.041, which corroborates the observed variance between the dependent and independent variables. The model also displayed a high standard error (1.050) and F-statistic (1.382). However, the influence of both workplace and academic level on communication skills was found to be statistically significant ($p < 0.05$), indicating that these variables exert a measurable impact on the dependent variable. Specifically, the negative direction of the regression coefficients suggests an inverse relationship: As the professional setting becomes more specialized or demanding (e.g., transitioning from general to clinical environments), and as the academic qualification level rises, there is a corresponding decline in reported communication skills. This may reflect increased focus on technical or clinical competencies at the expense of interpersonal communication, particularly in environments where workload or institutional culture may deprioritize relational aspects of psychological service provision (Figure 1).

In the model predicting psychotherapist competence, gender (Variable 1) showed a statistically significant

relationship with competence ($B = 0.44, p = 0.02$), suggesting that gender plays a role in how competence is perceived or demonstrated. Educational Level (Variable 5) also showed a small but significant effect ($\beta = 0.02, p = 0.02$), indicating that therapists with different academic qualifications may differ in their perceived competence. Meanwhile, the specialization of the specialist (Variable 4) and place of work (Variable 2) had weaker or non-significant contributions to the model, suggesting a limited or context-dependent influence.

On the right side of the figure, the model predicting patient communication skills reveals that place of work (Variable 2) and specialization of the specialist (Variable 4) had meaningful associations with communication ability. In particular, place of work was associated with a regression coefficient of $B = 0.18$ and a standardized $\beta = 0.14$, with $p < 0.05$, indicating a statistically significant effect. This implies that the working environment of the psychotherapist may influence their ability to communicate effectively with patients. Other variables, such as gender and educational level, appeared in the model but did not reach statistical significance in predicting communication outcomes.

Each arrow in the figure is annotated with the unstandardized coefficient (B), the standardized coefficient (β), and the significance level (p), providing a concise visual summary of the regression analysis. These models help to clarify the distinct patterns of influence that background characteristics exert on both professional competence and

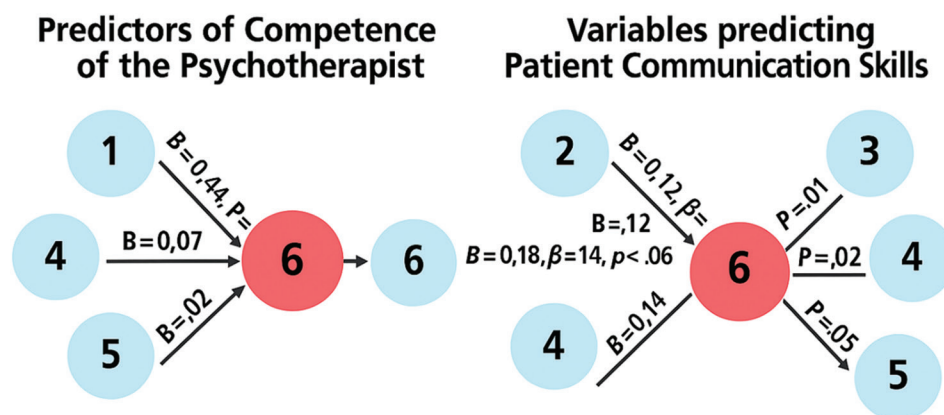


Figure 1. Nature of the prediction between independent and dependent variables. This figure presents two separate regression models. The left side illustrates the predictors of psychotherapist competence, while the right side shows the predictors of patient communication skills. Each red circle (labelled “6”) represents the dependent variable in the respective model, and it is surrounded by five blue circles representing the independent variables: 1: Gender; 2: Place of work; 3: Number of years of experience; 4: Specialization of the specialist; 6: Educational level

patient-facing communication in psychological service settings.

4. Discussion

The results of the study reveal significant differences in the dimensions of the CSS, highlighting empathy as the most obvious trait, while respect and authenticity scored the lowest. Specifically, empathy had the highest mean score (54.1976), suggesting that patients view psychotherapists as highly empathetic—demonstrating the ability to understand their emotions, challenges, and perspectives. This aligns with previous studies emphasizing the critical role of empathy. Empathy has been shown to strengthen student-teacher relationships, enhance motivation and sense of belonging, and improve academic outcomes. For example, a systematic review highlighted that empathy in teaching is associated with better student engagement and educational results.³⁴ Conversely, the lower mean scores for respect and authenticity suggest potential areas for improvement in how psychotherapists express genuine respect and authenticity towards patients. Authenticity in educational interactions is critical to building trust and fostering a supportive learning environment. A study highlighted the complexities of cultivating both authenticity and empathy in educational contexts, noting that while these traits are frequently emphasized, they are often inadequately modeled or developed in practice.³⁵

Regarding the dimensions of the psychotherapists’ self-efficacy scale, the highest mean score was observed in the clinical competence dimension (20.4073), while the lowest mean score was recorded in the influence regulation dimension (7.9514). The overall mean score for the scale was 79.3313. These findings suggest that psychotherapists

tend to prioritize structured and measurable skills (e.g., cognitive behavioral therapy techniques and knowledge of psychopharmacology) during both training and clinical practice. This emphasis likely reflects the influence of clinical guidelines and standardized protocols, which provide clear standards for performance. The strength in clinical efficiency indicates that psychotherapists are effectively integrating scientific and procedural knowledge in patient care.

The findings also reveal that psychotherapists show comparatively lower proficiency in managing emotional dynamics—both their own (e.g., countertransference, stress) and those of their patients (e.g., sadness, anger, anxiety). Emotional regulation skills tend to be more subjective and harder to quantify, which likely contributes to their limited emphasis on formal training. This includes insufficient focus on essential components such as mindfulness, self-reflection, and trauma-responsive care. In contrast, clinical competence received the highest mean score (20.41), indicating that psychotherapists demonstrate strong capabilities in clinical decision-making, diagnosis, and treatment planning. This aligns with existing literature that underscores the critical role of evidence-based interventions and technical expertise in delivering high-quality mental health care.³⁶ While a high degree of clinical efficacy reflects strong clinical competence, the lower scores in emotional regulation highlight a key development gap. These findings underscore the need for balanced training that integrates both technical proficiency and emotional competencies to improve the quality of treatment and the well-being of psychotherapists and patients.^{20,37-39}

The analysis revealed that the workplace and academic level of the psychotherapist were statistically

significant predictors ($p < 0.05$) of the perceived quality of psychological services provided to cancer patients. The overall model explained 41% of the variance in psychotherapist competence, suggesting a moderate level of predictability. However, the model accounted for only 16% of the variance in communication skills, indicating a weaker predictive relationship in this domain. This may suggest that the work environment and academic levels of psychotherapists affect both their competence and the quality of psychological care provided. While effective communication is necessary for high-quality care, it appears to be inadequate on its own. Other critical factors, such as emotional intelligence, professional experience, and institutional support, likely play an important role in psychological service effectiveness. Hence, further research is warranted to develop a comprehensive model of psychological care.

The results of the above study are consistent with a number of previous studies that confirmed the importance of psychotherapists' competence in the success of psychological interventions for cancer patients.⁴⁰ For example, it was reported that psychotherapist competence significantly enhances patient health, reducing psychological distress by 40%. Additionally, delivering effective, evidence-based care increases patient adherence and satisfaction by approximately 30%.³⁶ Similarly, the integration of deep learning-assisted psychotherapy enhanced psychotherapist competence and improved treatment outcomes by 20%.⁴¹ Competent psychotherapists also contribute to enhancing emotional resilience in cancer patients receiving palliative care by 25%.⁴² Moreover, high psychotherapist competence is associated with a 50% improvement in treatment success and emotional stability.⁴³ One of the expected contributions of this study is to improve the quality of psychological care by ensuring it is more efficient and responsive to patient needs. Our findings highlight the strengths and developmental needs of psychotherapists, offering valuable insights for training and professional development programs.

4.1. Strengths and limitations

One of the notable strengths of this study lies in its focus on the quality of psychological support for cancer patients, an important yet often neglected aspect of comprehensive cancer care. Through the opinions of psychotherapists, the study offers a realistic and professionally grounded assessment of the nature and quality of services provided. The findings provide valuable insights that can be used to develop training programs and improve work environments in health institutions. However, a key limitation of the study is its exclusive reliance on professionals' perspectives, which may overlook the lived experiences and satisfaction levels of patients themselves—a crucial

element in evaluating service quality. Additionally, there is a possibility of positive self-assessment bias, where some practitioners may inadvertently rate the services they provide more favorably than is warranted, potentially affecting the objectivity and accuracy of the results.

This study is also characterized by several methodological aspects that enhance its reliability. Foremost among these is the use of standardized instruments with established psychometric validity and reliability, ensuring the rigor and consistency of the measurements. Moreover, the inclusion of a specialized sample of psychotherapists with direct experience in providing care to cancer patients lends the findings professional depth and contextual accuracy. The study also bridges a notable research gap in the Arab context by addressing the quality of psychological services from the perspective of their providers in a sensitive medical context. However, there are some limitations to consider. The study's reliance on self-reported data may introduce social desirability and response biases, potentially affecting the objectivity of the responses. Additionally, the cross-sectional design limits the ability to establish causal relationships between variables. Limiting the sample to specialists from a specific academic background may limit the generalization of results. Furthermore, the absence of patient perspectives limits the comprehensiveness of the evaluation.

4.2. Future implications and perspectives

The findings of this study offer several important directions for future practice and research. Institutions can utilize these results to enhance communication skills training and develop self-efficacy among mental health professionals working with cancer patients. This aligns with existing evidence that effective communication improves psychological outcomes and patient satisfaction.^{5,11} Future research should explore patient perspectives directly, as the therapeutic alliance has been shown to significantly impact treatment outcomes.^{12,20} Investigating the congruence between specialist evaluations and patient satisfaction could yield deeper insights into service quality. Additional predictive factors, such as emotional intelligence,⁹ organizational support,²¹ psychotherapists' years of service,³⁶ and psychological resilience,²⁴ warrant further evaluation to refine predictive models and improve clinical effectiveness. Moreover, longitudinal studies are needed to assess the sustained impact of psychotherapists' skills on long-term patient well-being, complementing recent findings on the durability of psychotherapy outcomes.¹⁷ By grounding future research in these established areas, the psychological care provided to cancer patients can become more patient-centered, comprehensive, and evidence-based.

5. Conclusion

From our study's findings, empathy is the most important factor in providing high-quality psychological services to cancer patients, which confirms its vital role in fostering a strong therapeutic alliance and providing psychological support throughout the treatment. This underscores the need to prioritize the development of empathetic communication in clinical training, ensuring a more effective and humane treatment experience. In particular, the results highlight the importance of enhancing respect and authenticity in psychotherapist-patient interactions, suggesting targeted training programs should be designed to strengthen these dimensions of communication. Moreover, future research should explore additional variables that may further influence the quality of psychological services, including professional experience, emotional intelligence, and organizational support within treatment institutions. Investigating these factors can provide deeper scientific insights and inform the development of evidence-based strategies aimed at improving service delivery, psychotherapist performance, and ultimately, patient outcomes.

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Conflict of interest

The author declares no conflicts of interest.

Author contributions

This is a single-authored article.

Ethics approval and consent to participate

This study was reviewed and approved by the Research Ethics Committee of the university (approval no. 16/53253). Informed consent was obtained from all subjects involved in the study.

Consent for publication

Informed consent was obtained from all human participants involved in this study for the use of their data and. The consent was collected electronically through a Google Form, which clearly explained the purpose of the research, the voluntary nature of participation, and the measures taken to ensure confidentiality and data protection.

Availability of data

Raw data supporting this article is available from the author upon reasonable request.

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Appendix

Health professionals communication skills scale (HP-CSS)

List of 42 items

1. I respect the right of patients to express themselves freely
2. I explore the emotions of my patients
3. I respect the autonomy and freedom of patients
4. When the patient speaks, I show interest through body gestures (nodding, eye contact, smiles, etc.)
5. I provide information to patients (whenever my professional competency permits me) about what concerns them
6. I listen to patients without prejudice, regardless of their physical appearance, mannerisms, or form of expression
7. I express my opinions and desires clearly to patients
8. When I give information, I use silence to allow the patient to assimilate what I am saying
9. When I give information to patients, I do so in understandable terms
10. When a patient does something that does not seem right, I express my disagreement or discomfort
11. I dedicate time to listen and try to understand the needs of patients
12. I try to understand the feelings of my patient
13. When I interact with patients, I express my opinions clearly and firmly
14. I believe that the patient is entitled to receive health information
15. I feel that I respect the needs of patients
16. I find it difficult to make requests of patients
17. I make sure that patients have comprehended the information provided
18. I find it difficult to ask for information from the patients
19. I say things clearly and with sincerity
20. I clearly inform patients about the objectives of the therapeutic process
21. I can recognize what a patient is feeling without them telling me
22. I know how to interpret gestures and expressions of the patients
23. I am aware of the emotional state of patients
24. I find it easy to start a conversation with patients
25. I maintain eye contact when talking to patients
26. I act honestly with patients
27. I ensure that patients understand the reasons behind my recommendations
28. I understand when a patient is suffering emotionally
29. I can empathize with the fears and anxieties of patients

30. I explain the consequences of each procedure or treatment in a simple way
31. I smile and maintain a friendly tone of voice when addressing patients
32. I use appropriate gestures to create a welcoming environment
33. I treat patients as people, not just as cases or diseases
34. I adapt my communication according to the cultural background of the patient
35. I show openness to patients' doubts and concerns
36. I acknowledge patients' feelings even when I don't agree with them
37. I adjust my emotional tone according to the patient's condition
38. I use written material or drawings to support verbal communication when needed
39. I make sure to repeat important information when necessary
40. I use humor appropriately to help relax patients
41. I acknowledge the suffering expressed by the patient
42. I adapt the way I communicate depending on whether the patient is a child, adult, or elderly person.

HP-CSS

Original source

Leal-Costa, C., Tirado-González, S., Rodríguez-Marín, J., & Vander-Hofstadt, C. (2016). *Psychometric properties of the Health Professionals Communication Skills Scale (HP-CSS)*. *International Journal of Clinical and Health Psychology*, 16(1), 76–86. <https://doi.org/10.1016/j.ijchp.2015.04.001>

Item distribution by dimensions

1. **Informative communication (12 items)**
Assesses how professionals give and receive information clearly and adequately.
Items: 3, 6, 11, 13, 16, 18, 20, 27, 30, 38, 39, 42
2. **Empathy (13 items)**
Assesses understanding and sharing the emotions of the patient.
Items: 4, 5, 12, 14, 17, 21, 22, 23, 28, 29, 36, 37, 41
3. **Respect and authenticity (5 items)**
Assesses honesty and respect toward patients in the therapeutic relationship.
Items: 2, 10, 26, 33, 34
4. **Social skills (12 items)**
Assesses assertiveness and confidence in social and clinical interaction.
Items: 1, 7, 8, 9, 15, 19, 24, 25, 31, 32, 35, 40