



# Coping strategies in cancer patients. A single-center study

\*Correspondence:

[vccl.hcl16@gmail.com](mailto:vccl.hcl16@gmail.com)

Address: QFXV+V42, Quito. Edificio de la Facultad de Ciencias Psicológicas, Universidad Central del Ecuador. Quito. CP: 170129. Teléfono [593] 3216532. Ext 1021.

**Conflict of interest:** The authors declare that they have no conflict of interest.

**Received:** April 2, 2022

**Accepted:** July 7, 2022


**Published:** August 8, 2022

**Editor:** Dra. Evelyn Valencia Espinoza

**Cite:**

Cruz V, Echeverría W. Coping strategies in cancer patients. A single-center study. *Rev. Oncol. Ecu* 2022;32(2):169-179.

**DOI:** <https://doi.org/10.33821/632>

 Copyright Cruz V, et al. This article is distributed under the terms of [Creative Commons Attribution License BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows the use and redistribution of citing the source and the original author.

**Veronica Cristina Cruz Lucero** <sup>1</sup> , **Wilson Oswaldo Echeverría Villacreses** <sup>1</sup>

1. Clinical Psychology career, Faculty of Psychological Sciences, Universidad Central del Ecuador, Quito - Ecuador.

## Abstract

**Introduction:** Cancer diagnosis generates emotional instability, which precludes adequate coping in many cases. Coping is the constantly changing cognitive and behavioral effort that develops to handle specific demands such as cancer diagnosis. This research aimed to identify coping strategies in a group of cancer patients in a national reference hospital.

**Methodology:** This cross-sectional study was carried out at the Eugenio Espejo Hospital in Quito, Ecuador, from January to June 2018, with a nonprobabilistic sample of patients with neoplasms. Demographic and clinical variables and the 40-year coping test were recorded. The CSI questions "The Coping Strategies Inventory (CSI). Descriptive univariate and bivariate statistics are used.

**Results:** Forty-seven cases were analyzed; 74% were women, with an average age of 55 years. Complete secondary education was provided in 38% of cases. The coping strategies that were presented in 70% of the patients were cognitive restructuring (REC) and problem avoidance (EVP); in 15%, "problem resolution" (REP) was presented. Coping Strategies in men were REP with 57%, while Emotional Expression (EEM) was presented in women with 86%. In the first six months, 77% used the EEM; from 7 to 12 months, 19% used the self-criticism strategy (AUC); from 1 to 2 years, 17% used the wishful thinking strategy (PSD); and from 3 or more years, 14% used the resolution of problems (REP).

**Conclusion:** Coping strategies are significantly used in the first six months after a cancer diagnosis, after which the strategies decrease below 20%.

**Keywords:**

MeSH: Neoplasms; Psychological Adaptation, Psychological Practice, Depression, Dysthymic Disorder.

**DOI:** 10.33821/632

## Introduction

Cancer is a progressive disease that affects the mental health of people who suffer from it. Patients diagnosed with cancer experience changes in their daily lives because their chances

of leading "a normal life" are diminished. When humans find themselves in threatening situations, such as a cancer diagnosis, emotional instability is generated since the person is vulnerable due to the changes that will occur during the disease. In many cases, this makes it impossible to adequately cope.

Coping was developed by Lazarus and Folkman (1984) [1]. These authors defined coping as "Those constantly changing cognitive and behavioral efforts developed to handle specific external and internal demands that are evaluated as exceeding or overflowing the individual's resources." "Coping is a cognitive and behavioral effort to manage, reduce, minimize, dominate or tolerate the external and internal demands that appear and generate alterations" [2].

In the last 20 years, this area of research has developed around the so-called coping strategies. Its objective is to analyze how people deal with specific stressors: chronic illnesses, daily stressors such as a high pace of work, or stressful life events such as job loss or infertility diagnosis [3].

In general, coping refers to the series of "thoughts and actions that enable people to handle difficult situations" [4], "refers to coping as a stage of recurrent change through which the individual faces the demands of the sociocultural context that determine the reciprocal relationship in their way of acting internally and externally." [5].

In addition, it can be said that it is defined as the "cognitive and behavioral" "effort" that an individual must make to handle these external (environmental, stressors) or internal (emotional state) demands and that are evaluated as something that exceeds the person's resources. Is what has been agreed to be called coping strategies" [6].

"With this broad definition, it can be thought that emotional reactions such as anger or depression are also part of the general coping process that an organism carries out in a demanding situation, for example, staying in bed when a patient feels depressed. It is a type of coping strategy, in the same way that a more active strategy can be (e.g., going to the doctor); although the nature of these strategies is not always conscious, empirical research has focused on those that individuals can consciously recognize" [7].

"Research on coping strategies has been conceptually driven both by a set of cultural stereotypes about how we think people normally behave or should behave in the face of a given aversive event, and by theories supported by scant data or unreliable measures and When faced with a chronic illness or the death of a child, for example, it is expected that there will be a reaction of deep despair and, consequently, the focus of the study has focused on these adverse reactions of grief, hopelessness, and depression. However, recent research on coping with irreparable adverse events shows that these characteristic visions may respond more to a stereotype than to what happens. [8, 9]. This research aimed to identify coping strategies in a group of cancer patients in a national reference

---

hospital.

## Materials and methods

### Study design

This was an observational, descriptive, observational, cross-sectional study.

### Study area

The study was carried out in the clinical oncology department of the "Eugenio Espejo" Specialty Hospital of the Ministry of Public Health in Quito-Ecuador. The study period was from January 1, 2018, to June 30, 2018.

#### Universe and sample

The population was made up of patients admitted to the hospitalization of the institution. The sample calculation was nonprobabilistic for census-type convenience, in which all possible cases that can be analyzed are included.

#### Participants

Adult patients with solid or hematological tumors were included. Cases of brain tumors and situations in which the patient's cognitive status could not be assessed for any reason, including the use of sedatives, were excluded. Patients in the palliative stage were excluded.

#### Variables

Sociodemographic variables are included: age, sex, education, and marital status. Clinical variables: oncological diagnosis on admission, stage of the disease. Coping strategies.

#### Procedures, techniques, and instruments.

The data were collected from the clinical history in a form designed exclusively for that purpose. The institutional electronic system was used for case investigation. The database was coded with serial numbers, thus protecting the confidentiality of the information and identity of the patients. The psychological reagent of 40 questions called "The Inventory of Coping Strategies (CSI)" was applied, which reports eight primary scales:

1. Problem-solving: cognitive and behavioral strategies to eliminate stress by modifying the situation that produces it.
2. Cognitive restructuring: cognitive strategies that modify the meaning of the situation or event.
3. Social support: strategies related to the search for emotional support.
4. Emotional expression: strategies to release emotions in the stress process.
5. Problem avoidance: Strategies that include denial and avoidance of thoughts or actions related to the event.
6. Wishful thinking: cognitive strategies that reflect the wish that reality was not stressful.
7. Social withdrawal: withdrawal strategies from friends, family, partners, and significant others associated with the emotional reaction to the stressful process.
8. Self-criticism: strategies based on self-blame and self-criticism for the occurrence of a stressful situation or its inadequate handling.

Of the eight primary subscales, five items are obtained with the sum of the responses to the following questions:

Troubleshooting (REP) 01+09+17+25+33  
 Self-criticism (AUC) 02+10+18+26+34  
 Emotional expression (EEM)  
 03+11+19+27+35  
 Wishful thinking (PSD)  
 04+12+20+28+36  
 Social support (PHC) 05+13+21+29+37

Cognitive restructuring (REC) 06+14+22+30+3  
 8Problem avoidance (EVP) 07+15+23+31+39  
 Social withdrawal (RES) 08+16+24+32+40

**Bias avoidance**

To guarantee the reliability of the information, the researchers were trained in data collection. A double checklist was used to include all cases. The data were validated and curated by the researchers VCCL and WOEV. To avoid possible interviewer, information, and memory biases, the data were guarded at all times by the principal investigator with appropriate guidelines and records. Observation and selection bias was avoided by applying the participant selection criteria. All the clinical variables of the psychological sessions of the period above were recorded.

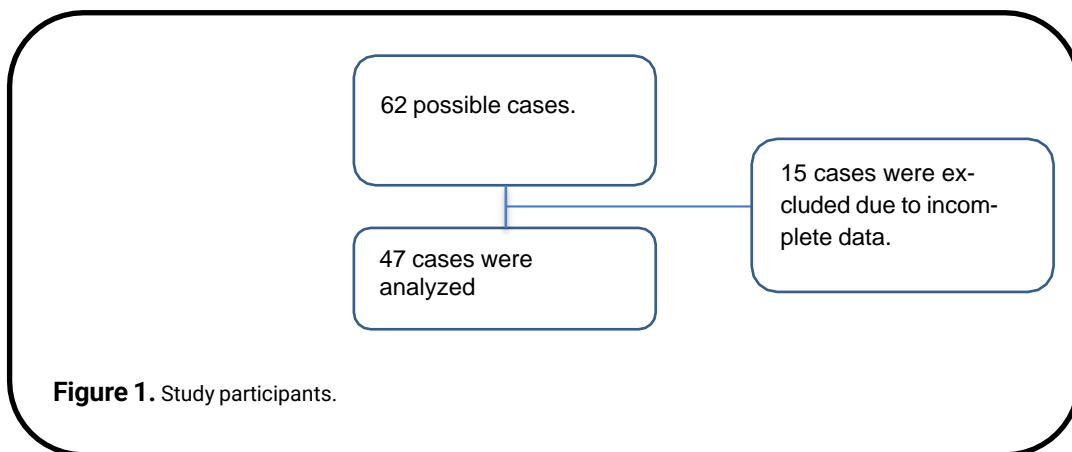
**Statistical analysis**

Initially, a descriptive univariate analysis of the sample is performed. The statistical package was SPSS version 20.0 for PC (Armonk, NY: IBM Corp.) licensed to the researchers.

**Results**

**Study participants**

The study included 47 analyzable cases (Figure 1).



**Figure 1.** Study participants.

**Sample characterization**

Seventy percent of the patients were adults aged 31-59 years. Adolescents from 15 to 20 years old accounted for 6%. Women were 74%, in contrast to 26% of men. Of the 47 participants in the study. Marital status reflected that 45% of the patients were married, the highest percent- age of the population, while a lower percentage of 2% were widowed. The level of education reflects that 38% of the patients have completed high school, compared to 2% corresponding to patients without education, observing that the group did not present problems for the in- vestigation. The occupation of the patients is found with a high percentage of 47% in house- work since the participating population is predominantly female, while 2% corresponds rela- tively to patients who have a profession, but due to their diagnosis, they cannot exercise it.

Regarding the religion of the patients, 74% are Catholics, the highest percentage of the population, while 2% are Adventists, a lower percentage. According to the results obtained, 47% of the patients have been diagnosed with breast cancer; the cases diagnosed with a percentage less than 2% are lung cancer, but it is present and requires attention (Table 1).

Table 1. Demographic data of the patients in the study group.

		N = 47	%
Age	Adolescent (15-20 years)	3	6%
	Young adolescent (21-30 years old)	7	15%
	Adult (31-59 years)	33	70%
	Older Adult (60 and up)	4	9%
Sex	Men	12	26%
	Woman	35	74%
Marital status	Married	21	45%
	Divorced	4	9%
	Separate	4	9%
	Single	10	21%
	Free Union	7	15%
	Widower	1	2%
Level of instruction	without instruction	1	2%
	complete primary	14	30%
	incomplete primary	3	6%
	Completed Secondary	18	38%
	Incomplete high school	4	9%
	full top	5	11%
	incomplete top	2	4%
Occupation	Housework	22	47%
	Seamstress	8	17%
	Student	3	6%
	Locksmith	3	6%
	None	2	4%
	Farmer	1	2%
	Businessman	1	2%
	Gastronomy	1	2%
	Teacher	1	2%
	Nutritionist	1	2%
	lawyer	1	2%
	Electrical Technician	1	2%
	Private Employee	1	2%
	Religion	Adventist	1
Catholic		35	74%
Christian		6	13%
Evangelical		2	4%
None		3	6%

### Coping strategies

The coping strategies that were identified in cancer patients after applying the CSI inventory were presented with a high percentage of 70% in cognitive restructuring and problem avoidance and a lower percentage of 15% in problem solving (Table 2). The coping strategies that occur in men correspond to problem solving with a score higher than 57%, while emotional

expression occurs with a score lower than 14%, in contrast to women with a score greater than 86% in emotional expression and a score less than 43% in problem solving (Table 3). According to the time of diagnosis, we found that from 1 to 6 months, a percentage of 77% corresponds to the expression of emotions strategy; from 7 to 12 months with 19% to the self-criticism strategy; from 1 to 2 years with 17% wishful thinking strategy relatively with 9% from 2 to 3 years; of 3 or more years with 14% corresponds to resolution of problems. In addition, it can be seen that the coping strategies are presented with high scores from 1 to 6 months, resulting in their presentation in this time interval (Table 4).

Table 2. Coping strategies in cancer patients.

	Frequency	%
Troubleshooting	7	15%
Self-criticism	16	3.4%
Emotional Expression	22	47%
Wishful Thinking	23	49%
Social Support	15	32%
Cognitive Restructuring	33	70%
Problem Avoidance	33	70%
Social Withdrawal	28	60%

Table 3. Coping strategies by sex.

	Men	Women
Troubleshooting	57%	43%
Self-criticism	25%	75%
Emotional Expression	14%	86%
Wishful Thinking	26%	74%
Social Support	20%	80%
Cognitive Restructuring	30%	70%
Problem Avoidance	30%	70%
Social Withdrawal	29%	71%

Table 4. Strategy of coping of the patients according to the diagnosis weather.

	1 to 6 months	7 to 12 months	1 to 2 years	2 to 3 years	≥ 3 years
Troubleshooting	71%	14%	-	-	14%
Self-criticism	69%	19%	6%	6%	-
Emotional Expression	77%	18%	-	5%	-
Wishful Thinking	57%	13%	17%	9%	4%
Social Support	73%	7%	7%	7%	7%
Cognitive Restructuring	64%	12%	12%	6%	6%
Problem Avoidance	64%	18%	12%	3%	3%
Social Withdrawal	57%	14%	14%	7%	7%

## Discussion

The coping strategies that are most used in cancer patients at the "Eugenio Espejo" Specialty

Hospital are the cognitive restructuring and problem avoidance strategies, with a high score of 70%. What can be compared with a previous study about psychological coping strategies in breast cancer [ 9 ], which concludes that the coping strategies denial and cognitive avoid- ance are found with an average score of 4.79 and 4.78, respectively, which correspond to the strategies most used by the subjects evaluated, also shows that 62% of patients use denial almost always or permanently as a coping strategy and 60% do the same with cognitive avoid- ance, which suggests that they are strategies frequently used by this group of patients. For Izquierdo, quoted by Oblitas, cognitive avoidance "is one of the ways to deal with stress during illness when it is observed that complaining disturbs family and friends, or when the reality is harsh and difficult to bear. Both avoidance and the use of a sense of humor or detachment from the problem can temporarily give some reassurance; but later, its efficacy can interfere with adaptation to the disease". However, this situation does not imply that the group of women evaluated does not make cognitive efforts to solve the problem because they con- stantly analyze the situation and rethink what they have to do to recover.

The problem-solving strategy, with an average score of 4.6, ranks as the third most used by patients in Nariño, which differs from the current study since the problem-solving strategy, with a percentage of 15%, is considered the least used by cancer patients.

Another relevant aspect of the investigation is the diagnosis, in which a score greater than 47% was observed in breast cancer [ 10 ].

New prospective studies should be established in the future, taking these strategies into account.

---

## Conclusions

The strategies most used by cancer patients are the cognitive restructuring and problem avoidance strategies. Based on these results, it is observed that people with this diagnosis use coping mechanisms focused on cognitions or thoughts as the main points of strength to cope with the disease because they evaluate the situation and their thoughts change their way of thinking from negative aspects to positive aspects. Regarding the time of diagnosis, it was possible to visualize that patients with cancer acquire coping strategies from 1 to 6 months, finding us with high scores in the eight coping strategies concerning the other time intervals. The coping strategies that prevail in men correspond to problem solving with a score greater than 57%, while in women they correspond to a score greater than 86% in emotional expres- sion. The characteristics of each gender help each one to use the strategies to face their dis- ease better.

---

## Abbreviations

CSI: The Inventory of Coping Strategies (CSI).

---

## Administrative information

### Nota del Editor

La Revista Oncología Ecu permanece neutral con respecto a los reclamos jurisdiccionales en mapas publicados y afiliaciones institucionales.

#### Additional Files

The authors declare none.

---

#### Acknowledgments

The authors thank all the people of the institutions who collaborated in the development of this research.

---

#### Author contributions

1. Conceptualization: Verónica Cristina Cruz Lucero.
2. Formal analysis: Wilson Oswaldo Echeverría Villacreses.
3. Research: Veronica Cristina Cruz Lucero.
4. Methodology: Wilson Oswaldo Echeverría Villacreses.
5. Project administration: Wilson Oswaldo Echeverría Villacreses, Verónica Cristina Cruz Lucero.
6. Supervision: Wilson Oswaldo Echeverría Villacreses.
7. Validation: Wilson Oswaldo Echeverría Villacreses.
8. Visualization: Wilson Oswaldo Echeverría Villacreses.
9. Writing - draft or original: Verónica Cristina Cruz Lucero.
10. Writing - revision and edition: Wilson Oswaldo Echeverría Villacreses, Verónica Cristina Cruz Lucero.

All authors read and approved the final version of the manuscript.

---

#### Financing

The authors did not receive any financial recognition for this research work. Expenses incurred in studies and laboratory tests constitute the usual expense of patients admitted to the institution and did not constitute an additional expense. The authors subsidized the administrative costs of this research.

---

#### Availability of data and materials

Data availability is available upon request to the corresponding author. No other materials were reported.

---

## Statements

#### Ethics committee approval

It does not apply to observational studies with a review of databases or medical records.

---

#### Consent to publication

This does not apply to studies that do not publish explicit images such as CT scans, MRIs, and physical exam images.

---



### Conflicts of interest

The authors declare that they have no conflict of interest or competence.

---

## References

1. Greer JA, Applebaum AJ, Jacobsen JC, Temel JS, Jackson VA. Understanding and Addressing the Role of Coping in Palliative Care for Patients With Advanced Cancer. *J Clin Oncol*. 2020 Mar 20;38(9):915-925. DOI: 10.1200/JCO.19.00013. Epub 2020 February 5. PMID: [32023161](#); PMCID: PMC7082158.
2. Levenets O, Stepurko T, Polese A, Pavlova M, Groot W. Coping strategies of cancer patients in Ukraine. *Int J Health Plann Manage*. 2019 Oct;34(4):1423-1438. DOI: 10.1002/hpm.2802. Epub 2019 May 16. PMID: [31095792](#).
3. Inci H, Inci F, Ersoy S, Karatas F, Adahan D. Self-esteem, metacognition, and coping strategies in cancer patients: A case-control study. *J Cancer Res Ther*. 2021 Jul-Sep;17(4):956-962. DOI: 10.4103/jcrt.JCRT\_618\_19. PMID: [34528548](#).
4. Guan T, Santacroce SJ, Chen DG, Song L. Illness uncertainty, coping, and quality of life among patients with prostate cancer. *Psychooncology*. 2020 Jun;29(6):1019-1025. DOI: 10.1002/pon.5372. Epub 2020 March 13. PMID: [32128938](#); PMCID: PMC7440775.
5. Doherty M, Gardner D, Finik J. The financial coping strategies of US cancer patients and survivors. *Support Care Cancer*. 2021 Oct;29(10):5753-5762. DOI: 10.1007/s00520-021-06113-z. Epub 2021 March 18. PMID: [33738592](#).
6. Silva AVD, Zandonade E, Amorim MHC. Anxiety and coping in women with breast cancer in chemotherapy. *Rev Lat Am Enfermagem*. 2017 June 5;25:e2891. DOI: 10.1590/1518-8345.1722.2891. PMID: [28591299](#); PMCID: PMC5479372.
7. Furtado S, Stallworth T, Lee YM, Tariman JD. Stress and Coping: A Literature Review of Everyday Stressors and Strategies to Cope in Pediatric Patients With Cancer. *Clin J Oncol Nurs*. 2021 August 1;25(4):367-371. DOI: 10.1188/21.CJON.367-371. PMID: [34269354](#).
8. Kang Y, Son H. Age Differences in the Coping Strategies of Patients With Colorectal Cancer. *Cancer Nurs*. 2019 Jul/Aug;42(4):286-294. DOI: 10.1097/NCC.0000000000000604. PMID: [29757771](#).
9. Mohammadipour M, Pidad F. Coping Strategies, Locus of Control, and Quality of Life in Patients with Early- Stage Breast Cancer. *J Psychol*. 2021;155(4):375-386. DOI: 10.1080/00223980.2020.1816873. Epub 2021 April 8. PMID: [33830891](#).