Original Article

What Is Missing for You to Be Happy? Comparison of the Pursuit of Happiness Among Cancer Patients, Informal Caregivers, and Healthy Individuals

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Abstract

Context. After cancer diagnosis, personal value priorities may change in a way that would transform such values and how life is perceived by cancer patients and their caregivers, including happiness and its pursuit.

Objectives. The objective of the study was to analyze and compare what cancer patients, informal caregivers, and healthy population believe that would make them happy.

Methods. A qualitative content analysis was performed on the responses to a single question: "What is missing for you to be happy?" Narratives of cancer patients ($n = 242$, face-to-face interview), informal caregivers ($n = 125$, face-to-face interview), and healthy participants ($n = 1,671$, recruited through social media, online survey) were analyzed. Word clouds were created for each group of participants. Contents were identified and frequencies were compared among participants by means of chi-square and Fisher's exact tests.

Results. Overall, participants were pursuing better health ($n = 288$, 14.1%), better interpersonal relationships ($n = 456$, 22.4%), money ($n = 412$, 20.2%), and work-related aspects ($n = 481$, 23.6%). Cancer patients and informal caregivers sought better health and cure more often than when compared to healthy people ($P < 0.001$). Among cancer patients, survivors' profile tended to be similar to that of the healthy population concerning what they need to be happy. Unexpectedly, "cure" (22.7%) was more frequent among participants with incurable cancer.

Conclusion. Regardless of the group they were in, participants sought happiness in what they considered to be important to their lives, but it was something they did not have at the time of the interview. Psychoeducational and cognitive-behavioral strategies focused on how to deal with life expectations among people facing cancer are awaited. *J Pain Symptom Manage 2019;58:417−426.* © *2019 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.*

Introduction

Happiness is a subjective experience that represents one of the main goals in human life.[1,2] It is an experience of contentment or positive well-being, in association with the feeling that life is good, meaningful, and valuable.[3] Happiness is an internal experience that serves as a basis for each individual to judge his or her own life and "how" and "why" they experience it in a positive manner.[4−6] It is a complex concept for

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which many definitions are available in the literature.[7−9] Although poorly understood, it is hardly pursued.[6,10] In other and simpler words, happiness is the assessment of how much we like the life we live.[9,11] The United States Constitution considers it an unalienable human right[12] and the United Nations a fundamental human goal.[13]

Like "happiness", the term "quality of life" (QOL) is very particular, considered subjective and difficult to define by many authors. For this reason, the World Health Organization defined QOL as "the individual's perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards, and concerns."[14] They further stated that happiness is a widely presumed component of QOL.[14]

The lives of cancer patients and their caregivers may be affected by the cancer diagnosis, which might also influence how they see happiness.[5,15,16] The reason is that these individuals deal routinely with critical issues related to physical, social, emotional, and spiritual aspects,[16−19] in addition to undergoing an unknown and an uncertain experience.[20,21] In this study, informal caregivers are those who provide informal care, that is, they care for or provide help to family, friends, neighbors, or other known health reasons.[22]

Although patients present distressing symptoms associated with disease progression and even changes in QOL, they also report positive emotional states.[5,18,23] Caregivers of cancer patients may also have their lives affected by the cancer diagnosis[24−26] because they help patients deal with functional, clinical, and psychosocial issues.[17] All these factors can play a critical role in their mental health and QOL.[27,28] However, caregivers may also find upsides in these experiences, which may be associated with better outcomes in well-being and levels of happiness.[19,29,30]

This may occur because the subjective well-being of a person may depend on value priorities of individuals.[31] Personal values reflect what is essentially important to a person and therefore form a central part of the individual's identity, guiding his or her action.[32] Experiences that occur during the oncology treatment may help patients in having a greater perception and learning, making them "more aware" of what really matters at the present moment and in the future. Cancer survivors refer to positive aspects of the disease and attribute them to their experience, that is, adaptive strategy, existential growth, and/or behavioral changes.[33] Thus, during this journey, personal value priorities may change in a way that transforms such values and the way life is perceived by cancer patients and their caregivers, including happiness and its pursuit.[34−36]

Most medical literature on oncology has evaluated the impact of cancer and its treatment on the development of negative consequences, that is, anxiety, depression, and distress. However, little research has been done to measure positive psychological change after cancer. With a focus on positive psychology, our hypothesis is that cancer patients, as well as informal caregivers, should consider and point out specific items, but different from those of the general population, to describe what would make them happier.

Given the constant pursuit of happiness by human beings, the aim of the present study was to analyze and compare what the healthy population, cancer patients, and informal caregivers believe would make them happy.

Methods

Study Design

The present study is a part of a larger yet unpublished research project that seeks to investigate the indices of happiness, life satisfaction, and perception of positive and negative effects of the Brazilian population and to identify conditions associated with the individual perception of happiness. This is a qualitative content analysis based on responses to a single question: "What is missing for you to be happy?"

Ethical Issues

The present study complied with resolution no. 466/12 from the Brazilian National Health Council and was duly approved by the Research Ethics Committee at Barretos Cancer Hospital (ruling no. 1.098.789 and 1.114.730). All online and in-person participants read and signed an informed consent form agreeing to voluntary participation.

Eligibility Criteria and Study Participants

Individuals who met all the inclusion and exclusion criteria were included in the study.

For general population, the inclusion criteria included Brazilian nationals; residing in Brazilian municipalities; having a Facebook and/or WhatsApp account. The exclusion criterion was age under 18 years.

For informal caregivers (people who were accompanying cancer patients at the time of the interview, being familiar or not), the inclusion criteria included Brazilian nationals; able to read and write; accompanying a cancer patient (relative or not) during treatment/follow-up at the cancer hospital. The exclusion criteria included age under 18 years old; any relevant neuropsychiatric condition preventing the patient from understanding and answering the health assessment questionnaire.

For cancer patients, the inclusion criteria included histological diagnosis of cancer of any type and clinical stage; age 18 to 75 years old; both sexes; able to read and write; in one of the following treatment phases: no evidence of disease and not receiving cancer treatment for at least two years, receiving systemic

adjuvant treatment, or receiving palliative care exclusively. The exclusion criteria included any relevant neuropsychiatric condition that would prevent patients from understanding and answering the health assessment questionnaire; having hematologic cancer.

Study Setting and Data Collection

The recruitment strategy used was online data collection through the social network Facebook and the WhatsApp application and face-to-face data collection. Participants from the general population of all five Brazilian regions were recruited online via the Facebook social network (three different methodologies were used) and the WhatsApp application. The complete recruitment strategy is described in detail in Supplementary Material 1. The survey was answered on the SurveyMonkey platform. In general terms, the South and Southeast regions of Brazil are wealthier than other regions. In the Northeast region, for example, 40% of the population survives on a minimum wage.

A convenience sample of cancer patients and informal caregivers was interviewed in person using the same evaluation forms answered online. Patients were recruited at the oncology outpatient clinics and informal caregivers at two different institutional support houses, where cancer patients from other locations are lodged while being treated in the city of Barretos. Regarding patients, it was planned that an equal number of participants should be included among the three groups: cancer survivors, undergoing adjuvant treatment, and receiving palliative care exclusively (without antineoplastic treatment).

Data Collection

The present qualitative analysis was based on the responses to a single question: "What is missing for you to be happy?" The participants recruited online via Facebook and WhatsApp answered the survey individually by entering their responses on a SurveyMonkey form. Cancer patients and informal caregivers were interviewed in person in a reserved room and alone, by two trained nurses.

Participants were assessed only once. No interviews were recorded. The data collected online were automatically entered into SurveyMonkey spreadsheets. Responses given in person were transcribed on paper by interviewers during interviews. All the online and transcribed responses were later exported to IBM SPSS Statistics for Windows, version 21.0 (IBM Corp., Armonk, NY) and NVivo qualitative data analysis software, version 11 Pro (QSR International Pty Ltd) programs. Although the time taken to answer the open-ended question was not computed, given the short length of the responses, it was estimated as a few minutes.

Sample Size

Traditionally, qualitative studies are not based on a statistical sample size calculation. However, the present study consisted of a secondary analysis of data collected in a larger, quantitative study with a calculated sample size. In any case, the robust sample size of this study is relevant when considering the intention to investigate the prevalence of narratives among different groups. Although qualitative studies usually analyze long narratives from a few interviewees, the present one was based on short narratives from a large number of participants.

Data Analysis

Word Cloud Analysis. Word clouds can provide easy, quick, and meaningful analysis of qualitative data by providing interpretations through text size and color.[37] In brief, the data were organized by synthesizing the narratives into one or more "words" relevant to topics mentioned in responses (phrase labels). Next, word clouds were generated, which graphically represented narratives and the frequency of words.

Content analysis. A qualitative data analysis was performed based on Bardin's content analysis methodology.[38] The first step was the preanalysis, which consisted of direct and intense contact with the material and organization of the data to meet the evaluation standards, including exhaustiveness, representativeness, homogeneity, and relevance. The next step was to organize the topics according to their relevance and/or repetition (codification and categorization of the data). Word clouds were used by coders as exploratory forms of analysis that helped them to interpret the material. Transcripts were independently coded into categories and subcategories by two researchers (B. S. R. P. and M. G. d. C.); disagreements in coding were resolved during a consensus meeting with three investigators (B. S. R. P., M. G. d. C., and C. E. P.). The quantitative analysis was performed using the program NVivo 11 Pro.

At the end of the aforementioned procedures, investigators found differences in the response patterns among the groups of participants. For this reason, they decided to perform a joint analysis of all groups together and a separate analysis for the following groups:[1] general population,[2] informal caregivers, and[3] cancer patients. The group of patients was also analyzed according to the corresponding phase of

Sociodemographic Characteristics of Study Participants ($n = 2580$)

Characteristics	Cancer Patients ($n = 342$), n (%)	Informal Caregivers ($n = 126$), n (%)	General Population ($n = 2112$), n (%)
Gender			
Male	122 (35.7)	28 (22.2)	470 (22.3)
Female	220 (64.3)	98 (77.8)	1642 (77.7)
Race (ethnicity)			
White	207 (60.5)	39 (31.0)	1483 (70.2)
Black	30 (8.8)	18 (14.3)	83 (3.9)
Mulatto	90 (26.3)	67 (53.2)	476 (22.5)
Asian	07 (2.1)	02 (1.6)	55 (2.7)
Missing	08 (2.3)	00 (0.0)	15 (0.7)
Age (yrs)			
18–29	17 (5.0)	28 (22.2)	938 (44.4)
30–39	24 (7.0)	42 (33.3)	699 (33.1)
40–49	68 (19.9)	19 (15.1)	277 (13.1)
50–59	124 (36.3)	27 (21.4)	141 (6.7)
60–69	78 (22.8)	08 (6.3)	47 (2.2)
≥70	30 (8.8)	02 (1.6)	10 (0.5)
Missing	01 (0.2)	00 (0.0)	00 (00)
Marital status			
Married or live married	189 (55.3)	75 (59.5)	1002 (47.4)
Windowed	35 (10.2)	05 (4.0)	24 (1.2)
Separated or divorced	48 (14.0)	08 (6.3)	123 (5.8)
Single	64 (18.7)	38 (30.2)	951 (45.0)
Other/do not know	06 (1.8)	00 (0.0)	12 (0.6)
Region where they live			
North	19 (5.6)	57 (45.2)	168 (8.0)
Northeast	06 (1.8)	18 (14.3)	240 (11.4)
Southeast	264 (77.2)	00 (0.0)	964 (45.6)
Midwest	46 (13.5)	48 (38.1)	179 (8.5)
South	07 (2.0)	03 (2.4)	561 (26.6)
Location where they live			
Urban area	312 (91.2)	101 (80.2)	2060 (97.5)
Rural area	30 (8.8)	25 (19.8)	52 (2.5)
Educational level			
<8 years	186 (54.4)	47 (37.3)	26 (1.2)
8 to 11 years	77 (22.5)	54 (42.9)	218 (10.3)
>11 years	79 (23.1)	25 (19.8)	1866 (88.4)
Missing	00 (0.0)	00 (0.0)	02 (0.1)
Professional activity currently			
Yes	282 (82.5)	115 (91.3)	2030 (96.1)
No	60 (17.5)	11 (8.7)	82 (3.9)

"treatment," namely "cancer survivors," "adjuvant treatment," and "exclusive palliative care." It is noteworthy that palliative care meets the needs of all patients who need symptom relief and the needs of patients and their families for psychosocial and supportive care.[39] They are appropriate for patients diagnosed with incurable diseases, regardless of the supposed survival prognosis of months or years. Exclusive palliative care is indicated when patients are in advanced stages and have a very low chance of being cured or when they are experiencing the terminal phase of the disease.[39]

Frequencies of identified themes (categories and subcategories) were compared among the general population, informal caregivers, and cancer patients by means of the chi-square test or Fisher's exact test. Similarly, frequencies of themes identified in narratives were compared among subgroups of cancer patients. Statistical analysis was performed adopting $P < 0.05$ as the significance level.

Results

Data were collected from October 2015 to October 2016. The final sample comprised 2580 participants: general population, $n = 2112$; cancer patients, $n = 342$; and informal caregivers, $n = 126$. Twenty-six cancer patients and eight informal caregivers were approached by the interviewer but not included in the study. Of those, three cancer patients were in significant emotional distress according to the interviewer's view, which prevented them from participating in the study. Since not all participants in the larger research project answered the question being analyzed in the present study, only the narratives

Fig. 1. Word clouds generated using participants' statements concerning their pursuit of happiness. a) Healthy population; b) informal caregivers; c) cancer patients; d) cancer patients, survivors; e) cancer patients, adjuvant treatment; f) cancer patients, exclusive palliative care.

Fig. 2. Graphically description of categories and subcategories based on participants' statements. Categories and subcategories are shown in dark gray circles and light gray circles, respectively. At the center of the figure is the open question of the study "What is missing for you to be happy?"

Table 2
Frequency of Categories and Subcategories Found in the Narrative Analysis per Group

Categories and Subcategories[a]	Full Sample $n = 2038$, n (%)	Type of Participant			P-value[c]
		Cancer Patients, ($n = 242$), n (%)	Informal Caregivers ($n = 125$), n (%)	General Population ($n = 1671$), n (%)	
Category 1: nothing	232 (11.4)	45 (18.6)	20 (16.0)	166 (9.93)	<0.001
Category 2: better health	288 (14.1)	115 (47.5)	68 (54.4)	105 (6.3)	<0.001
Subcategory 2a: cure	73 (3.6)	19 (7.8)	31 (24.8)	23 (1.4)	<0.001
Category 3: interpersonal relationships	456 (22.4)	20 (8.2)	31 (24.8)	405 (24.2)	<0.001
Subcategory 3a: romantic relationship	186 (9.1)	7 (2.9)	7 (5.6)	172 (10.2)	<0.001
Subcategory 3b: building a family	170 (8.3)	3 (1.2)	6 (4.8)	161 (9.6)	<0.001
Subcategory 3c: family closeness	88 (4.3)	3 (1.2)	15 (12.0)	70 (4.1)	<0.001
Category 4: to "have" to "be"	524 (25.7)	54 (22.3)	17 (13.6)	453 (27.1)	0.002
Subcategory 4a: money	412 (20.2)	33 (9.6)	10 (8.0)	369 (22.1)	<0.001
Subcategory 4b: material things	145 (7.11)	24 (9.9)	7 (5.6)	114 (6.8)	0.165
Category 5: spirituality	59 (2.9)	1 (0.4)	1 (0.8)	57 (3.4)	0.007[b]
Category 7: leisure and rest	106 (5.2)	3 (1.2)	1 (0.8)	102 (6.1)	<0.001[b]
Category 8: work	481 (23.6)	12 (4.9)	9 (7.2)	460 (27.5)	<0.001[b]
Subcategory 8a: learning goals	111 (5.4)	2 (0.8)	2 (1.6)	107 (6.4)	<0.001[b]

[a]Names of categories are abbreviated.
[b]Fisher's exact test.
[c]Chi-square test.

from 2038 participants (79%) were included in the qualitative analysis. Table 1 describes the characteristics of study participants.

Word Clouds

Based on participants' narratives and their synthesis into two or more words relevant to topics addressed in the responses, word clouds were generated for groups and subgroups, which summarized the findings (Figure 1). The clouds included larger (higher frequency) and smaller (lower frequency) words.

The words "profession" ($n = 389$; 16.5%) and "money" ($n = 367$; 15.6%) were more evident in responses given by the general healthy population compared with patients and informal caregivers. In turn, the term "better health" was easily perceptible among patients ($n = 101$; 30.9%) and informal caregivers ($n = 41$; 24.8%). Unexpectedly, the word "cure" ($n = 10$; 19.6%) was more frequent among participants with incurable cancer (palliative care exclusively). Another finding deserving attention is the size of the word "nothing" for cancer patients categorized as "survivors" ($n = 21$; 16.2%) and under "adjuvant treatment" ($n = 22$; 15.1%).

Content Analysis

Nine categories were identified; some of them were further subcategorized. Figure 2 depicts the identified brief categories, and Supplementary Table 1 provides full category names and some illustrative examples. Most participants preferred to respond in short sentences, although they had the opportunity to give longer

answers, both in the face-to-face and in the electronic format (up to 1000 characters could be typed in).

Tables 2 and 3 describe the frequencies of categories and subcategories identified in the analysis of the narratives per group and subgroup.

Responses corresponding to category 1, "nothing," were more frequent among patients under adjuvant treatment (22.4%; $P < 0.001$) and survivors (21.0%; $P < 0.001$) compared with patients exclusively under palliative care (4.5%; $P < 0.001$) (Table 3). Although the frequency of category 2, "I wish for health for myself or someone else in order to be happy," did not differ significantly among the subgroups of cancer patients ($P = 0.137$), there was a higher percentage of these responses among informal caregivers (54.4%; $P < 0.001$) and the total population of cancer patients, regardless of the treatment phase (47.5%; $P < 0.001$) (Table 2). Subcategory 2a, "I hope to find in healing a reason to be happy," was more frequent among informal caregivers (24.8%; $P < 0.001$) (Table 2) and cancer patients exclusively under palliative care (22.77%; $P < 0.001$) (Table 3).

Category 3, "Good interpersonal relationships would make me happier", appeared in 20% to 25% of the narratives from participants from the general population ($P < 0.001$), informal caregivers ($P < 0.001$), and survivors ($P = 0.45$) (Tables 2 and 3). In turn, subcategories 3a "I'm looking for a romantic relationship to be happier," 3b "Building a family would make me happier," and 3c "I need to be closer to my family to be happy" were seldom mentioned by the general population ($P < 0.001$), informal caregivers ($P < 0.001$), or cancer patients

Table 3
Frequency of Categories and Subcategories Found in the Analysis of Narratives of Cancer Patients

| Categories and Subcategories | Cancer Patients ($n = 242$) | | | *P*-value |
	Survivors, *n* (%)	Adjuvant Treatment, *n* (%)	Exclusive Palliative Care, *n* (%)	
Category 1: nothing	21 (21.0)	22 (22.4)	2 (4.5)	<0.001
Category 2: better health	34 (34.0)	46 (46.9)	35 (79.5)	0.137
Subcategory 2a: cure	2 (2.0)	7 (7.1)	10 (22.7)	0.046[a]
Category 3: interpersonal relationships	20 (20.0)	10 (10.2)	2 (4.5)	0.045[a]
Category 4: to "have" to "be"	29 (29.0)	17 (17.3)	8 (18.8)	<0.001
Subcategory 4a: money	18 (18.0)	10 (10.2)	5 (11.4)	0.012
Subcategory 4b: material things	12 (12.0)	9 (9.2)	3 (6.8)	0.046[a]

Categories 5, 6, 7, and 8 and subcategories 3a, 3b, 3c, 3d, and 8a were not included in the table due to their low frequency among cancer patients.
Subcategories 9a, 9b, and 9c were not subjected to statistical analysis because they did not occur among cancer patients.
[a]Fisher's exact test.

($P < 0.001$); the corresponding rates were low, with the maximum being 12% (Table 2). The frequency of these subcategories did not differ significantly among cancer patient subgroups (Table 3).

Category 4, "Having something to be happier," was mentioned in 22% to 29% of the narratives of all participants grouped together ($P = 0.002$), the general health population ($P = 0.002$), all cancer patients ($P = 0.002$), and survivors ($P < 0.001$) (Tables 2 and 3). Subcategory 4a, "Money would make me happier," was more frequent among the general population (22.1%; $P < 0.001$) (Table 2) and survivors (18.0%; $P = 0.012$) (Table 3). Subcategory 4 b, "I need material things to be happy," was more frequent among survivors (12.0%; $P = 0.046$) (Table 3).

Category 8, "Better professional status," was more frequent among the general population (27.5%; $P < 0.001$) (Table 2).

Other categories and subcategories (described in detail in Supplementary Table 1), although with pertinent content for the qualitative analysis, exhibited low frequencies of occurrence.

Discussion
Professional Status and Interpersonal Relationships

Almost 70% of the general healthy population comprised youths and individuals younger than 40 years, which may account for their focus on professional and financial matters. Indeed, the responses of 27.5% of this group fell into the category of "Better professional status." Since work-related activities represent a very large part of everyday life, individuals might come to believe that satisfaction with their professional life has a substantial impact on their happiness.[40]

The responses of 20% to 25% of the general population, informal caregivers, and cancer survivors fell into the category "Good interpersonal relationships would make me happier." Interestingly, this category was less frequent for patients under adjuvant treatment or exclusively under palliative care.

Interpersonal relationships are important for happiness.[21,41] However, cancer patients may have other priorities, such as treatment and health, and thus do not consider interpersonal relationships as an important factor. In addition, the literature evidences the improvement of family and friendship relationships during the oncological disease process,[33] suggesting that one might assume that in the presence of a threatening disease, friends and/or family are already close, which thus contributes to the low frequency of this category between these two subgroups.

Perceptible changes in personal value priorities are reported after a cancer diagnosis. Such changes might be considerable and lead patients and informal caregivers to restructure their values and how they perceive life. This can also influence how such individuals conceive of happiness, with possible changes in their expectations for the future and attribution of more value to simpler aspects of everyday life.[34,36] These changes might also reflect uncertainty about the future, which makes individuals, such as patients with chronic diseases, mainly focus on the present and what they consider to be missing.[20,21]

Better Health and Cure

Category 2, "I wish for health for myself or someone else in order to be happy," reinforced the idea conveyed by the word "health" in the word cloud, as its frequency was high in all groups and subgroups except for the general population. This was the category with the highest frequency among all analyzed groups. Other studies evidence the pursuit of health as one of the significant factors to increase happiness among patients with chronic diseases and their caregivers.[21]

Owing to the disease, cancer patients and informal caregivers might be looking for what is missing most: a better health. Despite other countless difficulties with which they have to cope during the complex period of disease and treatment, the recovery of one's own health or the health of a loved one might be what would bring the most happiness to individuals in these two groups. Although it might seem obvious,

these findings show that people seek what is missing in the pursuit of happiness in the present time. As a result, an individual might attribute little value to his or her own health (sedentary behavior, smoking, and so forth) but come to want it very much (in the pursuit of happiness) when ill.

Surprisingly, subcategory 2a, "I hope to find in healing a reason to be happy," was most frequently mentioned by patients exclusively under palliative care, that is, by those who do not have any chance of being cured. This finding points to an inconsistency between awareness of the prognosis and the perception of the intent of the treatment/care received.[42,43] Some factors, alone or jointly, might explain this unrealistic expectation,[44] such as resistance to acceptance,[45,46] denial,[47,48] difficulty understanding prognostic information,[49,50] and gaps in communication by healthcare professionals, who often face the stigma of giving bad news,[51,52] regarding the true goals of exclusive palliative care.

"To Have to Be"

Attention should also be paid to category 4, "Having something to be happier," since it was mainly mentioned by the general population and cancer survivors. A reasonable hypothesis to account for this finding is that cancer survivors gradually approximate the general population over time in terms of general quality of life[18,53] and well-being.[54] The pursuit of happiness, as it concerns the acquisition of things considered to be missing, may be similar between these two groups.

Nothing Is Missing

Many people seemed to be fully happy and answered that nothing was missing for them to be happy. Although this may seem to be a positive result, it may also suggest that people dedicate little time to thinking about themselves. As a result, they do not acknowledge the basic needs of personal growth and accomplishment. Approximately 20% of patients under adjuvant treatment and cancer survivors reported needing nothing else to be happy. This finding may be seen as a form of gratitude to God for being alive; the fact that these individuals overcame, at least temporarily, a threatening condition such as cancer may prevent them from complaining in the presence of an interviewer.

Traditionally, qualitative studies are not based on a statistical sample size calculation. However, the present study consisted of a secondary analysis of data collected in a larger, quantitative study with a calculated sample size. In any case, the robust sample size of this study is relevant when considering the intention to investigate the prevalence of narratives among different groups. Although qualitative studies usually analyze long narratives from a few interviewees, the present one was based on short narratives from a large number of participants.

Study Limitations

The present study has several limitations. First, study populations were subjected to different data collection methods. Live responses to an interviewer—even when duly trained not to interfere in the responses—may be considered a source of bias. In addition, studied populations are distinct from one another, not differing only in function of being a patient with cancer or an informal caregiver. Thus, other conditions related to lifestyle, income, and age should be involved in the pursuit of happiness. Another limitation of the present study, because of its cross-sectional methodology, is the impossibility of evaluating how the perception of what happiness is changes over time.

Conclusions

While cancer patients and informal caregivers desire better health and a cure to be happy, individuals from the general population wish for money, work, and better interpersonal relationships. Among cancer patients, the profile of survivors tended to be similar to that of the general population concerning what they need to be happy. In simple terms, individuals tend to seek what they consider to be important for their lives, but it is missing at the present time. Because it was a cross-sectional study, these were the results found at the time of the research. Additional studies are needed to correlate indices of happiness with perceptions of the pursuit of happiness and to assess the impact of such findings on clinical outcomes over time and among other populations. Psychoeducational and cognitive-behavioral strategies focused on how to deal with life expectations among people facing cancer are awaited, as well as how values are restructured and how life is perceived, which can influence how these individuals conceive of happiness.

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Appendix

Supplementary Material 1

Study Recruitment Strategy

Via Facebook

For the application of the instruments of data collection through the social network Facebook, an online program called SurveyMonkey® was used legally by registering on their site (https://pt.surveymonkey.com).

For data collection via Facebook, three different methodologies were used. These are described below:

✔ **Methodology 1**: The authors used their personal Facebook pages to share the research post.

✔ **Methodology 2:** For this methodology, municipalities were selected according to the demographic and IDH profile in each Brazilian state. To promote the research, we created Facebook pages specific to the study entitled "Happiness Research" "Happiness Research II" and "Happiness Research III". One hundred individuals from each municipality were invited. When identifying one or more of these, the first contact would be through inbox message on the person's page and friend request.

✔ **Methodology 3:** Researchers from the North, Northeast, Midwest, and South regions were contacted, without links with the researchers of this study, to be the "pole" of dissemination of the research, in order to carry out the same process of methodology 1 with the objective of propagating research and reach populations outside the southeast region and reach a significant number of cities in Brazil.

Via WhatsApp

Some contacts known to researchers residing in different regions of the country were contacted through the WhatsApp application. Explanatory text about the study was sent together with the research link. In addition to being asked to respond to the questionnaire online, they were encouraged to share the study text/link with their WhatsApp contacts.

Data collection in person

Data collection was carried out with caregivers of patients who undergo oncological treatment in the units of a cancer hospital. Recruitment took place in the hospital's institutional housing. Oncology patients were also recruited, and data collection was performed in person, being selected for convenience in the outpatient clinics and in the clinical and surgical hospitalization units and Hospital Oncology Palliative Care Unit.

Categories and Subcategories	Examples From Narratives
Category 1: Nothing	"I believe nothing is missing for me to be happy, I'm already happy because I believe there is happiness in simple everyday situations, we just need to find it. And that being happy depends on the value we give to difficulties and accomplishments, this is why I say I'm happy, satisfied with my life, amid all difficulties I find the amount of happiness I need." (ID: 1662 - General Population); "Nothing is missing" (ID: 2691 - Cancer Patient); "Anything" (ID: 2994 - Informal Caregiver)
Category 2: I wish for a better health for myself or someone else in order to be happy	"Finishing a medical treatment and having more health" (ID: 1254 - Cancer Patient); "Recovering from a health problem and returning to everyday activities." (ID: 2385 - Cancer Patient); "My own health, my husband's, my mother's" (ID: 2728 - Cancer Patient)
Subcategory 2a: I hope to find in a cure a reason to be happy	"Curing cancer would make me very happy now" (ID: 343 - General Population); "… Getting cured, because although I'm under palliative care and I'm rationally aware there's no cure for me, inside I always hope it might happen." (ID: 671 - Cancer Patient); "Discovering the cure for cancer, for many families not to suffer as my family did!" (ID: 1053 - General Population); "Getting cured from depression and everything related to it" (ID: 1714 - General Population); "Staying healthy, healed" (ID: 2690 - Cancer Patient); "Healing illness, health" (ID: 2716 - Cancer Patient); "Cure of cancer" (ID: 2786 - Cancer Patient); "The cure of the daughter" (ID: 2992 - Informal Caregiver); "The Nephew's cure" (ID: 3101 - Informal Caregiver)
Category 3: Good interpersonal relationships would make me happier	"Family togetherness" (ID: 184 - General Population); "Solve family problems relative to my spouse" (ID: 314 - General Population); "Closer relationships with other family members" (ID: 330 - General Population); "Be able to overcome the ideological barrier between me and my relatives and talk openly with them, always giving my honest opinion." (ID: 414 - General Population)
Subcategory 3a: I'm looking for a romantic relationship to be happier	"Overcome my divorce and find someone" (ID: 103 - General Population); "A true love and home" (ID: 140 - General Population); "A serious and stable relationship" (ID: 277 - General Population); "I'm happy. But if I could choose one more thing, someone to share life with" (ID: 289 - General Population); "Rebuild my love life" (ID: 423 - General Population); "Affective accomplishment, a partner" (ID: 445 - General Population); "A partner who loves me and whom I love" (ID: 470 - General Population); "Finding my soulmate" (ID: 1114 - Cancer Patient); "Meet someone I truly love and who loves me" (ID: 1142 - General Population); "A partner" (ID: 1263 - General Population)
Subcategory 3b: Building a family would make me happier	"Having a relationship and building a family" (ID: 85 - General Population); "Getting married and having a family" (ID: 150 - General Population); "Family, having a partner and children" (ID: 874 - General Population); "Love and children" (ID: 889 - General Population); "Building a family. Marriage!" (ID: 1035 - General Population); "Getting married and being close to my fiancée" (ID: 1277 - General Population); "Remarry" (ID: 1585 - General Population); "Find someone who completes me to grow old together." (ID: 1613 - General Population)
Subcategory 3c: I need to be closer to my family to be happy	"Be closer to distant relatives" (ID: 174 - General Population); "Be closer to my three children, I think we'll be next year. Enjoy my six grandchildren" (DI: 187 - General Population); "Spend more time with my nephews and relatives, distance and distancing" (ID: 189 - General Population); "That my son comes to live with me." (ID: 192 - General Population); "Be closer to my mom and sister" (ID: 393 - General Population)
Subcategory 3d: Friends, I'm missing good friends to be happy	"Friendly people around me, with whom I can share my feelings, fears, joys" (ID: 852 - General Population); "… Have more friends where I live" (ID: 1885 - General Population); "… Have true friends" (ID: 1965 - General Population); "… More loyal friends" (ID: 2098 - General Population); "Have close friends." (ID: 2599 - General Population)

Supplementary Table 1
Continued

Categories and Subcategories	Examples From Narratives
Category 4: "To have" to "be" happier	"Attain a desirable social level, without debts, my own home" (ID: 16 - General Population); "Financial structure, having my own home" (ID: 56 - General Population); "Conditions to buy a good house" (ID: 57 - Cancer Patient); "Better financial conditions to buy a car and better leisure activities (outings, trips, etc.)" (ID: 1046 - General Population); "Have a stable professional life and the desired financial condition." (ID: 2574 - General Population)
Subcategory 4a: Money would make me happier	"Have my own business to have complete financial independence" (ID: 31 - General Population); "Pay my debts" (ID: 181 - General Population); "Money to travel" (ID: 608 - General Population); "Money to help some people, move to another home, have access to places only money affords" (ID: 1288 - General Population); "A comfortable financial situation" (ID: 1525 - General Population); "Be very wealthy" (ID: 2877 - Cancer Patient); "A better financial condition" (ID: 2889 - Cancer Patient); "Have a good salary." (ID: 3037 - Informal Caregiver); "Improved family income" (ID: 3080 -Informal Caregiver); "… Improve the family income" (ID: 3094 - Informal Caregiver)
Subcategory 4b: I need material things to be happy	"Build my dream house" (ID: 21 - General Population); "My own new home" (ID: 126 - General Population); "I'm happy, but I dream of getting some material things, like my own home" (ID: 139 - General Population); "Have my own home and a car" (ID: 2755 − Cancer Patient); "Build a new house" (ID: 2839 - Cancer Patient); "Buy a car" (ID: 3027 - Informal Caregiver)
Category 5: To be more spiritual	"I need to know myself better" (ID: 11 - General Population); "Find deep meaning in everything" (ID: 48 - General Population); "Emotional, mental and spiritual strength and balance to cope with the natural problems of life" (ID: 91 - General Population); "Peace" (ID: 124 - General Population); "… Have discipline in religious practice" (ID:186 - General Population); "Find inner peace" (ID: 390 - General Population); "More self-knowledge" (ID: 883 - General Population); "Full trust in God, without fear … anxiety … anguish …" (ID: 1221 - General Population); "Be closer to God" (ID: 1332 - General Population); "What's missing for me to be happy is being more connected to the Father's will in my life and, of course, the arrival of the grand day of His second coming to come get us and live eternally happy with Him" (ID: 1417 - General Population); "More spiritual growth" (ID: 2202 - General Population); "More faith" (ID: 2250 - General Population); "More communion with God" (ID: 2465 - General Population); "Search for God" (ID: 2789 − Cancer Patient); "Have more God in life" (ID: 3087 - Informal Caregiver)
Category 6: Do good for others (altruism)	"… Be less selfish and help others more" (ID: 186 - General Population); "Help more people" (ID: 310 - General Population); "Put my gifts into practice, give more" (ID: 326 - General Population); "Work in something that provides care and well-being to people" (ID: 1046 - General Population); "… Help the needy" (ID: 1135 - General Population); "Accomplish my dreams and be in a condition to help the people around me who need me" (ID: 1219 - General Population); "… Rescue more abandoned animals" (ID: 1231 - General Population); "Have the financial condition to help someone very loved and important" (ID: 1543 - General Population); "Have time to do volunteer work." (ID: 2129 - General Population)
Category 7: More leisure activities and rest	"Stop working too much" (ID: 90 - General Population); "More leisure time; I work on weekends and I don't see my family and friends much" (ID: 129 - General Population); "Accomplish my dream of traveling across the world" (ID: 175 - General Population); "… Have more time to go out with my husband and travel" (ID: 286 - General Population); "Work less and spend more time with my family." (ID: 357 - General Population) "… Have more leisure and family time" (ID: 481 - General Population); "Work less, live more" (ID: 578 - General Population); "Have more free time" (ID: 1827 - General Population); "… Travel abroad more" (2337 - General Population)

(Continued)

Supplementary Table 1
Continued

Categories and Subcategories	Examples From Narratives
Category 8: Better professional status	"A job in my field with a decent salary" (ID: 05 - General Population); "I intend to change my profession, find something that will bring me more professional recognition and personal satisfaction" (ID: 39 - General Population); "… A job compatible with my degree of specialization" (ID: 85 - General Population); "Civil servant stability" (ID: 99 - General Population); "Consolidate my new career as a quantum therapist" (ID: 209 - General Population); "Job stability" (ID: 277 - General Population); "Professional success" (ID: 372 - General Population); "Feel more independent and autonomous to do the tasks and work related to my profession" (ID: 379 - General Population); "A job in my field with fair compensation" (ID: 610 - General Population); "A career that will give me a feeling of financial and professional accomplishment" (ID: 1092 - General Population); "… Follow the desired path for my career and vocation" (ID: 1419 - General Population); "Be recognized by the government for my profession (teaching)" (ID: 1458 - General Population); "Find myself professionally" (ID: 2522 - General Population)
Subcategory 8a: Accomplish my goals as a student	"To finish graduate school so I can go back to the town where my parents and boyfriend live and start my professional career" (ID: 51 - General Population); "Finish the medical residency program" (ID: 369 - General Population); "Get another college degree" (ID: 637 - General Population); "Get a master's degree in Education" (ID: 1133 - General Population); "Finish college." (ID: 1666 - General Population); "Finish the PhD" (ID: 2495 - General Population)
Category 9: A better Brazil and a better world	"Brazil with better opportunities, better education, a better healthcare network, without corruption, in short, with a better quality of life for the entire population "(ID: 33 - General Population); "That the Brazilian government be a part of it" (ID: 194 - General Population); "A better country with honest people" (ID: 242 - General Population); "A more fair society" (ID: 341 - General Population); "… A more fair world" (ID: 566 - Cancer Patient); "To live in a world without fear of violence, without corruption, without the concern of being cheated all the time" (ID: 695 - General Population); "A better world … without dishonest people, without hunger, inequality, poverty … Perhaps then we might be truly happy." (ID: 716 - General Population); "A country ruled by serious people to give us better living conditions" (ID: 900 - General Population); "A government that cares for our forsaken peoples, including the municipal and state governments, and the federal government, which abandoned us so long ago" (ID: 1608 - General Population)
Subcategory 9a: Social well-being	"… Less social inequality" (ID: 477 - General Population); "A more peaceful society, which appreciates equality/equity, income distribution and solidarity" (ID: 924 - General Population); "See Brazil become less unequal, too much suffering everywhere and due to different reasons" (ID: 1794 - General Population); "Social equity." (ID: 2184 - General Population)
Subcategory 9b: Less corruption	"… To live in a place with respect and without corruption" (ID: 311 - General Population); "Do away with the corrupt politicians in Brazil so there's more money for health care. Improve the quality of education in Brazilian schools" (ID: 511 - General Population); "Remove 'points of unhappiness.' From violence, unconformity with corruption and the current political-economic situation in the country to a financial condition different from the desired one. All these points don't let you sleep or be calm, and don't let us reach fulfillment as concerns happiness" (ID: 814 - General Population); "I'm happy, I'd be happier if corruption was expelled from the world!" (ID: 878 - General Population)
Subcategory 9c: Safety	"World peace" (1334 - General Population); "Safety (there have been too many burglaries in my neighborhood)" (ID: 1445 - General Population); "Feel safer in my town." (ID: 1687 - General Population)