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Experiences and perception of character strengths among patients with breast cancer in China: A qualitative study

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4 **·Experiences and perception of character strengths among patients**
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7 **with breast cancer in China: A qualitative study**
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Abstract

Objective To explore the patients' experiences on character strengths that Chinese patients experience after the diagnosis of breast cancer.

Design A qualitative, exploratory study using semi-structured interviews based on the patients' lived experience with diagnosed with breast cancer. Ethics approval was granted. Interviews were audio-recorded and transcribed verbatim. Values in Action Classification of Strengths provided conceptual framework for analysing strengths. Directed content analysis based on the classification of strengths and framework analysis were used to analyse transcribed data. The Standards for Reporting Qualitative Research (SRQR) guideline was followed.

Setting The Second Affiliated Hospital of Zhengzhou University and Henan Provincial Cancer Hospital in China.

Participants Adult patients over 18 years, diagnosed with breast cancer between October 2019 and December 2020 were recruited. We used purposive sample method to collected data from 24 participants diagnosed with breast cancer.

Results Six themes (virtues) emerged from our analysis. In addition, two new subthemes (character strengths) emerged in this study, selflessness and pragmatism respectively. Patients with breast cancer described a large repertoire of character strengths they used or wished for during survivorship, including gratitude, hope, humility, kindness, humor, honesty, and forgiveness. Cultural values (e.g. collectivism, familism, Confucianism and Buddhist beliefs) helped structure the experiences of Chinese patients' character strengths. Patients wanted their character strengths to be more noticed, appreciated and encouraged by others and reported their psychological trajectory of using personal strengths.

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3 **Conclusion** The findings indicated that patients with breast cancer believing character
4 strengths are important to them. Medical staff should pay more attention to motivating
5 and cultivating breast cancer patients' character strengths. Attention to make strength-
6 based practices workable in clinical health promotion programmes is necessary. The
7 healthcare system should develop tailored individualised psychological services that
8 specifically address patients' needs for the application of personalised character
9 strengths.
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21 **KEYWORDS**

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24 Breast cancer, character strengths, descriptive research, female, framework analysis,
25 psycho-oncology, well-being, individualised service
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31 **Strengths and limitations of this study**

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33 ▶ To our knowledge, this is the first qualitative study to explore the patients'
34 experience on character strengths for breast cancer.
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37 ▶ The qualitative design was used to explore the breast cancer patients' complex
38 experiences, beliefs and behaviours on character strengths.
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42 ▶ The study findings can be used to inform delivery of strength-based care and
43 individualised psychological support provided to patients with breast cancer.
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46 ▶ As qualitative methods prohibit generalisation, despite the data saturation achieved
47 in this study, there are results regarding transferability to other patients and different
48 settings that should be interpreted with caution.
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Introduction

Strength-based approaches are receiving increasing international attention [1], and are being applied to solve longitudinal clinical problems, such as promoting well-being and limiting ill-health [2]. Recognising and using individuals' strengths leads to positive outcomes, such as coping, recovery and greater meaning in life [3]. Instead of focusing on problems [4], researchers have proposed that character strengths should be incorporated into clinical practice to help clients enhance well-being [5].

Understanding personal strengths and supporting their use in health behaviours can help cancer patients improve their well-being [6]. In one practical case, strength-based approaches were adopted by clinicians to help breast cancer patients deal with the continuing challenges of survivorship [7].

Problem-oriented health care methods often overlook patients' strengths. The character strengths of patients with breast cancer have consequently received little attention [8]. Moreover, the majority of studies on character strengths have been conducted in Western countries [8,9]. The experiences and perception of character strengths among patients with breast cancer vary contextually, and the results of previous studies may not be directly applicable to Chinese breast cancer patients due to their social and cultural differences from Western patients [10].

Character is the positive and socially valued elements of personality, which have a moral component [11]. Character strengths are the core theme of positive psychology, and are a cluster of positive traits or dispositions manifested in values,

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4 thoughts, feelings, and behaviours. These personal strengths involve positive
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6 psychological qualities referring to the self, others and the world [12].
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9 Character strengths promote the individual's positive cognition, emotions, and
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11 behaviours. Concentrating on strengths allows individuals to focus on more than
12
13 avoiding distress or disorder [13]. Previous studies have demonstrated that character
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15 strengths are positively associated with quality of life, well-being, happiness and
16
17 general health [14]. Evidence is increasing that people who use their strengths on a
18
19 regular basis have higher levels of well-being [15]. However, medical staff and
20
21 caregivers tend to underestimate the personal strengths of cancer patients [16].
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23 Standardised, problem-oriented care may diminish patients' chances of achieving the
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25 best possible recovery [17].
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35 **Theoretical framework**

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37 The most extensively researched model of character strengths is the Values in
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39 Action Classification of Strengths and Virtues (VIA classification) [12]. The VIA
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41 classification is a theory-driven framework comprising 24 character strengths
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43 conceptually organised as reflections of six virtues: wisdom, courage, humanity,
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45 justice, temperance and transcendence. Studies of different cultures have revealed
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47 character strengths in different populations, including adolescents [18], college
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49 students [19], adults [11] and the elderly [2]. The classification model has been
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51 validated in 75 nations, with each sample including at least 150 respondents; these
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53 findings suggest substantial cross-cultural similarity in strengths [20]. Virtues are
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4 classes of character strengths that show individual differences but relative cross-
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6 cultural stability [21]. The character strengths perspective has been recognised in the
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8 field of psychological counselling and rehabilitation as a way to understand
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10 psychosocial adaptation to chronic diseases, especially cancer [22]. Because chronic
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12 diseases manifest themselves through a wide variety of symptoms and functional
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14 limitations [23], the specific meaning of character strengths are likely to vary across
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16 specific illnesses, cultural contexts and individuals. The six core virtue categories are
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18 universal, but these strengths are based on theoretical foundations [24]. Given that
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20 culture plays an important role in individuals' values, assumptions and needs [25], the
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22 character strengths of breast cancer patients may have different meanings and
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24 manifestations across different cultures. Moreover, researchers have highlighted the
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26 specific differences in the mental functioning of patients with various diseases and
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28 that of healthy individuals [26]. Therefore, a study of the character strengths of breast
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30 cancer patients within the Chinese context is expected to further strengthen the
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32 theoretical VIA classification.
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43 The evidence so far indicates that character strengths are a helpful personal
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45 resource [2]. However, there is a gap in the literature concerning how breast cancer
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47 patients identify their own strengths and use them. The applicability of the VIA
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49 classification among Chinese breast cancer patients is still unclear. Cultural values,
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51 such as collectivism, the importance of family, Confucianism and Buddhism could
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53 strongly determine how character strengths are expressed and the associated
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55 behaviour patterns. For example, Confucianism is a uniquely Chinese cultural concept
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4 that influences the definition of character strengths. This means that cultural factors
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6 play an important role in the theory of strengths. In this study, we explore the
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8 experiences and perception of character strengths among Chinese women with breast
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10 cancer.
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17 **Methods**

18 **Study design and population**

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22 In this qualitative study, we use a descriptive and exploratory approach to
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24 uncover aspects of the experiences and perceptions of character strengths in Chinese
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26 women with breast cancer. Semi-structured individual interviews were conducted.
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28 The Standards for Reporting Qualitative Research (SRQR) were followed [27].
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33 The researchers used a maximum variation sampling method and purposive
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35 sampling technique to recruit participants to richly or densely describe the culture or
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37 phenomenon of interest [28]. Regarding the sample size, the recruitment of
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39 interviewees stopped when the data reached a saturation point, indicating that the
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41 phenomenon could be understood comprehensively without further recruitment. Data
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43 saturation was achieved through repetition and confirmation of the information
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45 obtained by participants [29].
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51 The inclusion criteria were as follows: the patients were (a) women with a
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53 confirmed diagnosis of breast cancer; (b) aged above 18 years old; (c) native Chinese;
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55 (d) willing to participate in the study and offer informed consent. The exclusion
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57 criteria were as follows: the patient suffered from (a) one or more other life-
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4 threatening diseases, or (b) psychosis (for example, delusional disorder,
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6 schizophrenia).

11 **Patient and public involvement**

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14 Patients and/or the public were not involved in the design, conduct, reporting or
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16 dissemination plans of this research.

22 **Data collection**

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24 We used semi-structured interviews to foster interactivity and dialogue [30].
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27 The instruments used in this study included a demographic data sheet and a semi-
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29 structured interview guide. The demographic data sheet was devised to obtain
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31 information on the patient's age, marital status, educational level and types of breast
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33 cancer treatment. The interview guide was informed by the positive psychology
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35 model of character strengths and the previous literature. The interviews opened with a
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37 short introduction to the topic (e.g., a definition and explanation of 'character
38
39 strengths'). Each interview included eight questions designed to encourage discussion
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41 on perceptions and beliefs about character strengths (Table 1). Pilot interviews were
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43 conducted with three breast cancer patients to check the appropriateness of the
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45 interview process and the accessibility of the questions. The demographic data sheet
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47 took approximately five minutes to complete, and the whole interview took
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56 approximately 30 to 60 minutes.
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Participant recruitment and interviews were conducted in November and December 2019 in two provincial tertiary hospitals in mainland China. To ensure consistency, the same researcher conducted all of the interviews [31]. The participants were asked for reflections and conclusions to prevent misunderstandings or omissions. Data collection was performed using audiotape recording, supplemented with handwritten notes on non-verbal behaviours and impressions.

Table 1 Semi-structured interview guide used in this study

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1. From your perspective, what is your perception of character strengths?
 2. Can you share your experiences on your character strengths?
 3. Why did you use your character strengths?
 4. When you used your character strengths, were you more broadly interested in better understanding of yourself?
 5. What did you hope to achieve by your character strengths?
 6. What benefits did you expect to receive as a result of using your character strengths?
 7. In your opinion, what are the most important benefits or outcomes that have resulted from your character strengths?
 8. When you used your character strengths, were you looking for a solution to a specific problem or difficult situation?
 9. In what way(s) have your character strengths affected your daily life?
 10. In what way(s) have your character strengths help you met your expectations and/or needs?
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Data Analysis

Directed content analysis and framework analysis were used to analyse the data in an combination of inductive and deductive approaches [32]. The analysis took place in five stages: (1) Stage 1, Familiarisation: Immersion in the data by repeatedly reading transcriptions and making field notes; (2) Stage 2, Analytical framework development: Preparing key topics, identifying important themes and developing the

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4 thematic framework, (3) Stage 3, Indexing: Completing data structuring and pilot
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6 charting, refining and combining themes and sub-themes, (4) Stage 4, Charting:
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8 Drawing summary chart and transferring data into the framework matrix, and (5)
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10 Stage 5, Data mapping and interpreting: Comparing the analysis results to the original
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12 data and explaining the relationship between codes, subthemes and themes [33]. The
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14 VIA classification was used as the guiding framework for direct content analysis. This
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16 framework is described in Table 2. The findings were presented in a synthesised form
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18 of themes (virtues) and sub-themes (character strengths). No particular data software
19
20 was used for coding or organisational purposes. We not only sought to establish a
21
22 critical and common sense understanding of the text, but also to analyse it beyond
23
24 personal experience. We also looked for embedded character strengths in the content.
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26 The themes and sub-themes were collected in a Microsoft Excel spreadsheet, with
27
28 supporting descriptions and quotes. Demographic data were analysed using SPSS
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30 version 22.0 (SPSS, Inc., Chicago, IL) and descriptive statistics were obtained
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32 (frequencies, means, standard deviations and percentages).
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45 **Table 2** The Values in Action classification of virtues and character strengths

Virtues	Character strengths	Multiple descriptions, pronouns, and manifestations
1. Wisdom & Knowledge <i>Cognitive strengths related to attaining and using new knowledge</i>	Creativity	[originality, ingenuity, discovering new and innovative ways to do things, thinking of novel and productive ways to do things]
	Curiosity	[openness to experience, taking an interest in all of ongoing experience, enthusiastically exploring and discovering new things]
	Judgment & Open-Mindedness	[critical thinking, thinking things through and examining them from all sides]

	Love of Learning	[Relishing in the acquisition of new skills and knowledge, mastering new skills, topics, and bodies of knowledge]
	Perspective	[wisdom, providing wise counsel to others]
2. Courage <i>Emotional strengths that involve working hard to accomplish goals in the face of opposition</i>	Bravery	[valor, not withdrawing or shrinking from threat, challenge, difficulty, or pain]
	Perseverance	[persistence, finishing what one starts, industriousness, working hard to finish what is started]
	Honesty	[authenticity, integrity, speaking the truth and presenting oneself in a genuine and authentic way]
	Zest	[vitality, enthusiasm, vigor, energy, Approaching life with excitement and energy]
3. Humanity <i>Interpersonal strengths that involve developing relationships and caring for other people</i>	Capacity to Love and Be Loved	[Valuing close relations with others]
	Kindness	[generosity, doing favors, nurturance, care, compassion, altruistic love, being generous and doing good deeds]
	Social Intelligence	[emotional intelligence, personal intelligence, being aware of the motives and feelings of self and others, knowing how to adapt to different social situations]
4. Justice <i>Civic strengths related to be an integral part of a healthy community</i>	Teamwork	[citizenship, social responsibility, loyalty, Working collaboratively and well as member of a team or a group]
	Fairness	[Treating all people the same according to notions of fairness and justice and with impartiality]
	Leadership	[Effectively managing groups to complete activities, organizing group activities and seeing that they happen]
5. Temperance <i>Strengths related to the use of restraint in thoughts, emotions, and behavior</i>	Forgiveness & Mercy	[Forgiving those who have done wrong]
	Modesty & Humility	[Being modest and letting one's accomplishments speak for themselves]
	Prudence	[Being cautious about one's actions or choices; not saying or doing things that might later be regretted]
	Self-Regulation	[Regulating what one feels and does, self-control, Exercising self-control and discipline]
6. Transcendence <i>Strengths that provide meaning in life and exceed the limits of ordinary experience</i>	Appreciation of Beauty and Excellence	[awe, wonder, elevation, Noticing and admiring beauty and excellence, and/or skilled performance in all domains of everyday life]
	Gratitude	[Being aware of and thankful for the good things that happen]
	Hope	[optimism, future-mindedness, future orientation, Expecting the best in the future, and working actively to achieve it]

Humor	[playfulness, enjoying laughter and amusing others, liking to laugh and joke, bringing smiles to other people]
Religiousness & Spirituality	[faith, purpose, having beliefs about life that bring comfort, having coherent beliefs about the higher purpose and meaning of life]

Note. Terms in brackets are variants of the Character strength adapted from Peterson and Seligman (2004).

Trustworthiness

To increase the credibility of our findings, we used a peer checking process.

Discussion continued until a consensus was reached among the co-researchers [34].

Open dialogue and careful probing were used during the interviews to ensure that the information was reliable. To enhance transferability [35], we continued interviews until data saturation occurred, made clear and distinct descriptions of the content and presented rich information from the findings.

Ethics

All procedures were in accordance with the guidelines of the Research Ethics Committee of the University (CUHK Approval number: SBREC 19-114) and Joint Chinese University of Hong Kong–New Territories East Cluster Clinical Research Ethics Committee, reference number: 2019.429. A digital code was used to refer to each participant to maintain anonymity.

Results

Clinical and demographic characteristics

A total of 24 female breast cancer patients participated in the interviews. The average age of the participants was 52.54 years (range, 30–70 years). Table 3 outlines the participants' characteristics. Most of the participants had stage I/II breast cancer (66.7%), and the remainder (33.3%) had stage III/IV breast cancer. Seventeen participants (70.8%) had breast cancer in the left breast, five (20.8%) had cancer in the right breast and two (8.3%) had bilateral breast cancer.

Table 3 Demographic information and clinical data of the participants (N = 24)

Characteristics	Number	(%)
Age (years)		
Mean \pm SD	52.54 \pm 11.56	
Range	30-70	
Age <60	15	62.5
Age \geq 60	9	37.5
Marital status		
Married	21	87.5
Unmarried or widow	3	12.5
Occupation		
Employed	17	70.8
Unemployed	7	29.2
Education states		
Primary school and below	10	41.7
Junior school	4	16.7
Senior high school	7	29.2
Bachelor and above	3	12.5
Perceived Income		
Low	3	12.5
Middle	9	37.5
Good	7	29.2
High	5	20.8
Type of cancer		
Breast cancer	24	
Left	17	70.8
Right	5	20.8
Two sides	2	8.3

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3	Stage of disease		
4	I/II	16	66.7
5	III/IV	8	33.3
6			
7	Time since diagnosis (months)		
8	Mean	8.63	
9			
10	Adjuvant therapy		
11	Only had surgery	10	41.7
12	Also had chemotherapy or radiation	14	58.3
13	therapy		
14			

15 *Note. Because of rounding, percentages may not total 100.*

21 **Character strengths identified within the VIA framework**

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 24 The participants' main character strengths were consistent with the VIA
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 26 classification; they included cognitive strengths, emotional strengths, civic and
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 28 community strengths, interpersonal strengths, temperance strengths and transcendence
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 30 strengths. Table 4 summarises the character strengths of the breast cancer patients.
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 32 The original 24 strengths were identified in the findings, and two new strengths of
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 34 selflessness and pragmatism emerged in our study. The themes (virtues) and sub-
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 36 themes (strengths) are illustrated by sample quotes from the participants (Table 5).
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 38 The participants also gave their perceptions and comments on the outcomes and
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 40 expectations of identifying and using individual character strengths. In general, the
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 42 participants expressed improved self-awareness and a greater sense of purpose and
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 44 well-being.
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Table 4 Adapted from values in action classifications of character strengths

Virtues	Character strengths	Cultural adapted descriptions, pronouns, and manifestations
Cognitive strengths	Creativity	Ingenuity, doing things in innovative ways, thinking in innovative and unique ways; seeing things in different ways
	Curiosity	Interested in all experiences; motivated to discover and explore new things; want to learn about unknown objects, environments or experiences of others
	Judgment & Open-Mindedness	The ability to think, understand, analyze, discern or judge rationally, independently and comprehensively; thinking carefully; defensive thinking
	Love of Learning	Studious, be eager to learn, erudite, philomathic; mastering new skills; enjoy new knowledge, enjoy learning
	Perspective	Resourceful, wise, good at planning and handling things; excellent insight and vision, farsighted
Emotional strengths	Bravery	Fearless, courageous, heroic, resolute, brave and bold; not timid, not afraid of danger or difficulty, not shrinking back.
	Perseverance	Persevere to the end, no slackness, still persevere after repeated failures; hardworking, not give up halfway; diligent, industrious
	Honesty	True, honest; integrity, sincere and earnest, wholeheartedly; being true to oneself and others
	Zest	Enthusiastic about things or others; vigorous vitality; vividness in action, thought or expression, energetic
	Capacity to Love and be Loved	Valuing close relations with others; give love to others, be loved by others; feel the warmth, happiness, satisfaction and beauty in love, friendship, family affection, fraternity and other deep emotions for people and things.
Interpersonal strengths	Kindness	Benevolent, kind-hearted; generosity, nurturance, charitable; serving others without expectation
	Social Intelligence	Emotional intelligence, aware of the motives and feelings of oneself and others; knowing how to get along can make others comfortable
	Teamwork	Working collaboratively and well as member of a team or a group, unite and work together to get better results; loyalty to team or group and working well with others
	Fairness	Righteousness, uprightness; not afraid of the strong, not bullying the weak, stick to the right way; Treat everyone the same according to justice
	Leadership	Confucian leadership; influence others, improve the efficiency of the entire group and ensuring team harmony
Civic and community strengths	Selflessness^a	Dedication, not self-interested; proud to serve the collective people and ashamed to deviate from the people, proud of unity and mutual assistance, ashamed of self-interest; devotion to family and country.
	Forgiveness & Mercy	Forgive, ignore the faults of others; tolerant, considerate; not to care about wrongdoing or to hold accountable; compassion
	Modesty & Humility	Modest, polite, humble; reserved, courteous, not exaggerating one's ability or value; no boasting or
Restrained and temperance strengths		

		arrogance, not complacent; willing to accept criticism, and humbly ask people for advice.
	Prudence	Be cautious about actions or choices; solemnly, careful; dependable, stable, calm and not anxious in situations
	Self-Regulation	Self-control; disciplined, restraint; managing personal impulses, emotions, laziness and other bad habits
	Pragmatism ^a	Believe practice leads to true knowledge and wealth, believe actions speak louder than words, try to be practical, realistic, committed to the reality
Transcendence strengths	Appreciation of Beauty and Excellence	Appreciate, awe, fascinate and admire the beauty and excellence, and/or all outstanding skills, treasures or people
	Gratitude	Being aware of and thankful for the good things that happened, grateful, moved by the virtues of others, grateful for the kindness and favors of others, and seek ways to return
	Hope	Optimism, positive future mindedness, full of confidence in what is going on, open-minded and have good wishes for the future
	Humor	Funny, humorous, playfulness and enjoy talking witty, bring laughter and amusement to others
	Religiousness & Spirituality	Faith, believe in religion, unwavering belief, a state of mind that has trust or trust in someone or something, extremely convinced of a certain thought, doctrine, and as a personal belief

^a Newly emerged themes in the current study

Table 5 Examples from the participants in character strengths, with their anonymous code number and age

Character strengths	Quotes
Creativity	I feel that I always think differently from others of my age. The way I look at things is different. I usually make some fresh and unique gadgets for the children at home (Participant 14, 45).
Curiosity	I'm interested in hearing gossip about what's going on between my neighbours and where my relatives have travelled, or finding out what grocery they recommend and where supermarkets are offering cheaper discounts. I'm interested in all these experiences and things, sort of curious (Participant 22, 53).
Judgment & Open-Mindedness	I think I'm older, but much wiser than when I was younger. I've been through a lot of things and I'm not so attached and concerned about everything. Nowadays, when things come up again, I think very rationally and calmly about what to do, unlike the young people who are so whiny (Participant 17, 47).
Love of Learning	I usually learn a new thing, that is, learn to dance the popular square dance to divert my attention. Recently I learnt to play new cellphone apps like Douyin and Kuaishou with my friends. I feel that I do not have time to be unhappy when learning new things (Participant 1, 48).
Perspective	My personality is very good, just love to study and love to work. I usually use two mobile phones to study, and all the recordings on the other mobile phone (Participant 11, 30).
Bravery	I think life is only a few decades, like a white horse passing a gap. Sooner or later, it is the same thing. The key is that you must think about it and look down on everything. This is the wisdom of survival (Participant 3, 54).
	I think I dare to face these things myself. But my body is my own business, I must be brave (Participant 3, 54).

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3	Perseverance	My husband can feel that I am strong and persistent. Compared with others, the advantages my character brings is I can be a bit stronger against stress. (Participant 2, 67).
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6		I worked very hard in my work unit before, just want to get a promotion next year.
7		Unexpectedly, this illness disrupted the plan (Participant 4, 32).
8	Honesty	I am an ordinary person, I'm just straight hearted, and then I just say what I think, that is, I am honest and sincere (Participant 1, 48).
9		
10	Zest	Because I am passionate about making friends in the square dance group, now I am sick and many partners come to see me. I was encouraged when they came (Participant 10, 52).
11		
12		
13	Capacity to	I am filial to my parents-in-law and be a good daughter-in-law. After being sick, I am
14	Love and be	very happy and feel beloved to be taken care of after a long time. I feel that my
15	Loved	families support me and love me (Participant 1, 48).
16	Kindness	Then I never did anything bad. Then I felt like I was very nice. I was just being kind to
17		others. Repay grievances with virtue and be compassionate (Participant 1, 48).
18		I believe benevolent must be rewarded with kindness. I've always been a good person
19		(Participant 3, 54).
20	Social	Every time my family came, I said I was fine and did not want them to worry
21	Intelligence	(Participant 9, 65).
22	Teamwork	Three cobblers with their wits combined, equal Zhuge Liang the master mind-
23		collective wisdom often proves superior (two heads are better than one) (Participant 4,
24		32).
25		I used to work, and I can have a good relationship with my colleagues and
26		subordinates (Participant 11, 30).
27	Fairness	Any conflicts between them can be handled fairly no matter what I say. I got this
28		disease and I cannot do anything now (Participant 11, 30).
29	Leadership	I was also a small head in the unit before, and how to allocate jobs to everyone
30		harmoniously is also a skill, and it can improve the efficiency of the entire department
31		(Participant 12, 35).
32		I have made it to the position of department manager in my organisation and would not
33		have missed work had I not been ill. I had to get my people's affairs in order before I
34		was admitted to hospital (Participant 24, 37).
35		I feel that I am selfless. I have sacrificed my whole life, sacrificed for my family, and
36		cooperated with national policies. I feel that our generation pays more attention to the
37		collective and puts everyone's interests ahead of their own. This is also written in the
38	Selflessness	Eight Honors and Eight Shames (Participant 13, 60).
39		It is proud to serve the collective people and ashamed to deviate from the people. We
40		are proud of unity and mutual assistance, and ashamed of self-interest (Participant 16,
41		56).
42	Forgiveness &	Well, I think everyone is good, but many patients are now demanding and dissatisfied
43	Mercy	with the people around them. Sometimes they lose their temper at the small mistakes
44		of doctors and nurses. It is better to be tolerant and forgive like me (Participant 11, 30).
45	Modesty &	My family and patients still thought I was humble. I feel that my personality is simple,
46	Humility	and I get along well with everyone (Participant 5, 52).
47	Prudence	I take photographs of the bags of medication that I receive infusions of and the
48		medication that I take every day. I also keep the bill for each payment. I often talk to
49		my doctor about my condition and I think that being discreet will give me peace of
50		mind (Participant 23, 38).
51	Self-	I felt that my self-discipline was meaningful, so I strengthened my exercise.
52	Regulation	(Participant 8, 55).
53	Pragmatism	Practice brings real wealth, it speaks louder than words (Participant 3, 54).
54		I am a pragmatic person, I don't know how to say nice things. I do not afraid and have
55		no time to feel depressed. I do not want to worry about it. I just want to eat and drink
56		and do my work. I do not want anything else (Participant 2, 67)
57	Appreciation	I was reading a novel about the philosophy of life recently. I will read this book after
58	of Beauty and	treatment. I feel comfortable appreciating these beautiful things. I also appreciate the
59	Excellence	natural environment and feel better (Participant 12, 35).
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3	Gratitude	Everyone, whether old or young, should know how to be grateful (Participant 1, 48).
4		I think the nurses here have given me a lot of help, and the doctors respect my ideas
5		and help me with treatment. I am very grateful to them. The services in the hospital are
6		very good, so I feel very good (Participant 3, 54).
7		I feel that the doctors, nurses and family members are very concerned about me.
8		Everyone has a very good attitude. It is not easy for everyone to work and live. I have
9		a lot of spiritual support. I am very grateful (Participant 11, 30).
10	Hope	My family is pampering me now, which is pretty good. My husband said that I have
11		been optimistic in the past years. Well, I just want to be stronger anyway, everything
12		will definitely get better (Participant 2, 67).
13	Humor	But sometimes when I chat with patients in the department, no matter what I say,
14		everyone is very happy. It feels like I am everyone's pistachio. But I think I am more
15		cute than humorous (Participant 5, 52).
16	Religiousness & Spirituality	Just to get better soon, and live a few more years, I have been chanting and believing
17		in Buddha. My child also said that I had changed but felt that my mentality was much
18		better and calmer after relying on faith and religion (Participant 7, 65).
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Theme 1: Cognitive strengths

Cognitive strengths reflect wisdom, knowledge, exploration, openness and knowledge-seeking [12]. This theme involves five strengths: creativity, curiosity, judgment and open-mindedness, love of learning, and perspective. These subthemes reflect the manifestations of cognitive strengths based on wisdom, openness and knowledge. In response to unexpected situations or unfamiliar problems, the participants usually gave wise solutions. Some participants aided their recovery by reading about treatment and nursing skills, which also demonstrated their love of learning. Love of learning refers to cognitive engagement, mastering new skills and increasing existing knowledge [36]. Creativity refers to original and adaptive thought or behaviour. The narratives of the participants also reflected how they found new ways to deal with the familial and social problems encountered while receiving treatment.

Theme 2: Emotional strengths

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4 When the participants talked about their lives after breast cancer and the
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6 inherent difficulties they faced, they also showed the emotional strengths of courage,
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8 perseverance, honesty and enthusiasm. This theme involves four strengths: bravery,
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10 perseverance, honesty and zest. These subthemes reflect the Chinese manifestations of
11
12 emotional strengths. Being brave means not shrinking from challenges [37]. For
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14 example, some participants said that they dared to face physical damage after breast
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16 surgery and hair loss after chemotherapy. They felt that living was more important
17
18 than these considerations. Bravery enabled self-determination and helped them
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20 actively persevere. Other participants said frankly that they told their family members
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22 about their fear of death, while emphasising that their family members remained
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24 encouraging and supportive.
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35 **Theme 3: Interpersonal strengths**

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37 Interpersonal strengths clearly reflect humanity and justice. They include love,
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39 kindness, social intelligence and developing relationships and caring for other people.
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41 This theme involves three strengths: capacity to love and be loved, kindness and
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43 social intelligence. Social intelligence is the awareness of the motives and feelings of
44
45 oneself and others, and knowing how to adapt to different social situations [37]. This
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47 was demonstrated by many participants, especially patients who got along well with
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49 roommates and nurses during hospitalisation.
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58 **Theme 4: Civic and community strengths**

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4 Civic strengths are considered an integral part of a healthy community; they
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6 include teamwork, fairness and leadership. In our study, we also identified a fourth
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8 civic strength: selflessness. Teamwork refers to social responsibility and working
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10 collaboratively as a member of a team or group. Fairness involves treating people the
11
12 same according to principles of justice. Selflessness refers to dedication, rather than
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14 self-interest. This is a distinct cultural strength proposed by the Chinese participants
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16 in the study. Participants thought this was one of their strengths, which helped them
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18 obtain the respect of others and society.
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27 **Theme 5: Restraint and temperance strengths**

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30 Restraint and temperance strengths encompass forgiveness, modesty, prudence
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32 and self-regulation. In our study, this theme also contains a fifth strength: pragmatism.
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34 Modesty means an unwillingness to praise oneself and show off one's qualities or
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36 achievements [2,37]. In all of our interviews, when we first mentioned expressing
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38 personal strengths, the participants often avoided talking and reflected that humility is
39
40 a common occurrence. The participants were reluctant to talk about their own
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42 achievements and character strengths. They thought that talking about this would
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44 violate their culture's respect for humility, and they were embarrassed. In contrast,
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46 they were more willing to admit that they had many shortcomings. Chinese Confucian
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48 view has evolved into the view that humility makes people grow, while complacency
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50 and pride make people degenerate [38]. Pragmatism is related to facts or practical
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52 matters, and usually excludes intellectual or artistic matters. Pragmatism is a new
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4 emergent subtheme, which means practicality rather than idealism. This is another
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6 distinctly Chinese strength that may be related to China's long period of construction
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8 and development.
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11 12 13 14 **Theme 6: Transcendence strengths**

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17 Transcendence strengths provide meaning in life and exceed the limits of
18
19 ordinary experience. This theme contains five strengths: appreciation of beauty and
20
21 excellence, gratitude, hope, humour, and religiousness and spirituality. Although the
22
23 participants mentioned that their spirituality was related to Buddhism, it was more
24
25 about how they gained strength from their belief system and cultural values. These
26
27 strengths gave the participants guidelines, made them feel special, and enabled them
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29 to cope with the negative things in their life and treatment. Gratitude and spirituality
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31 were common strengths across all of the interviews. The participants mentioned that
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33 they tended to gain comfort from these strengths after their diagnosis, despite their
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35 physical weakness and psychological dysfunction.
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46 **Positive outcomes and expectations of identifying and using character strengths**

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48 Several subjective positive outcomes were frequently addressed by the
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50 participants in connection with the awareness of strengths. They included improved
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52 self-awareness, personal confidence and self-esteem, increased happiness, optimism, a
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54 greater sense of meaning in life, improved well-being and decreased distress. Better
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56 well-being and a sense of meaning were the most frequently addressed benefits
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4 (mentioned eleven times). In addition, in reference to these outcomes, most of the
5
6 related strengths were those that involved reconnecting with people, such as gratitude,
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8 kindness, selflessness and love. The most frequently quoted proverb was ‘good people
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10 get rewards’ (mentioned eight times); that is, they felt that if they did good deeds for
11
12 others, their health and life would improve.
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19 **Discussion**

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22 The patients with breast cancer in this study described a large repertoire of
23
24 character strengths they used or wished for during survivorship. In line with previous
25
26 studies [2], most of the themes and sub-themes coded in this study were in line with
27
28 VIA. Two more strengths — selflessness and pragmatism — emerged. Cultural
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30 values and culture (e.g., collectivism, importance of family, Confucianism and
31
32 Buddhism) helped structure the participants strengths and influenced their
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34 descriptions.
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41 Throughout the research process, the participants had difficulty identifying
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43 and talking about their strengths. This may demonstrate their strength of modesty.
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45 Such humbleness could be influenced by Chinese Confucian culture [39]. Other
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47 studies have also identified this barrier to the expression of strengths [2]. The
48
49 challenges encountered by our participants in transforming their strengths into
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51 descriptive language may reflect their need for more opportunities for self-awareness
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53 and self-reflection. Another possible explanation is the conceptual overlap between
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55 strengths and cultural values. This overlap may lead people to underestimate their
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4 capabilities [40] and their interpersonal and cognitive strengths. The participants also
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6 highlighted that they wanted their character strengths to be more noticed, appreciated
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8 and encouraged by others, such as family members and medical caregivers. Chinese
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10 culture emphasises the role of the family. The affairs of family members are usually
11
12 determined by the entire family [41]. In such a collectivist environment, individual
13
14 character is often not valued. Interaction with physicians and nurses was also
15
16 highlighted. The women's high respect for physicians and reliance on nurses led them
17
18 to attach great importance to communication. The awareness and praise of personal
19
20 character strengths by family members and medical caregivers enhanced their sense
21
22 of self-esteem and well-being while living with breast cancer. One previous study
23
24 similarly demonstrated that overcoming blindness to strengths could improve an
25
26 individual's self-efficacy and self-confidence, which in turn could affect their well-
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28 being [42].
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38 In our study, the participants with breast cancer did not differ from the healthy
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40 individuals studied in the previous literature in terms of transcendence strengths
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42 (appreciation of beauty and excellence, religiousness, spirituality) and cognitive
43
44 strengths (wisdom and knowledge). These are potential characteristics of breast
45
46 cancer patients that they can use when experiencing life and treatment events. These
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48 results are reflected in traditional palliative care or existing psychosocial programmes
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50 for breast cancer patients, in which patients are taught to express appropriate emotion
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52 and improve their problem-solving skills as part of the recovery process [43]. The
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54 breast cancer patients in this study experienced a similar appreciation of beauty. They
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4 appreciated excellence in all areas of life (art, nature and daily life) and in other
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6 people. They had coherent beliefs about truth and life independent of their disease and
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8 treatment.
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11 The experiences of emotional strengths, interpersonal strengths, civic and
12
13 community strengths, restrained and temperance strengths, and other types of strength
14
15 are significantly influenced by breast cancer and cultural values. Kindness and
16
17 gratitude are associated with positive affect [37], and were the character strengths
18
19 most frequently expressed by the participants. Studies have consistently shown that
20
21 strengths of the heart, such as kindness and gratitude, are more strongly associated
22
23 with well-being than individual strengths, such as creativity and leadership. The other
24
25 character strengths most frequently mentioned by the participants were love,
26
27 selflessness, honesty, modesty and hope. This coincides with the perception of
28
29 character in Chinese culture. Chinese people have inherited the Confucian emphasis
30
31 on the cultivation of good character traits, like benevolence and kindness [39].
32
33 Kindness and fairness are the important characteristics in the traditional culture of
34
35 benevolence and righteousness. Some of the participants emphasised that their belief
36
37 in Buddhism and religious practice made them feel much calmer during their breast
38
39 cancer episode, and they felt that their spirit and beliefs gave them hope and gave life
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41 new meaning. This finding also suggests that spirituality/religiousness is related to
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43 meaning and goals in life [44].
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56 Concepts also need to be understood within the prevailing sociocultural and
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58 political context [45]. The two newly emerging strengths are influenced by
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4 contemporary culture and policies. Selflessness refers to the characteristic Chinese
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6 concept that people should not be self-interested, be proud to serve the collective and
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8 ashamed to deviate from it, and strive for unity. Pragmatism emphasises beliefs that
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10 practice will lead to true knowledge and wealth; it has been strengthened by modern
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12 development policies.
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16 17 18 19 **Theoretical considerations and implications**

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21
22 Although there are other current theories and frameworks based on strengths,
23
24 they have a number of limitations; in contrast, VIA has achieved a wide range of
25
26 applications. Roux, Dingley and Bush (2002) introduced the theory of inner strength
27
28 and Lundman et al. (2010) offered a conceptual model of four core dimensions
29
30 [45,46]. However, most related studies have been carried out on women. Expressions
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32 of inner strength at different ages and in different life circumstances take different
33
34 forms [45]. Janssen, Van Regenmortel, and Abma (2011) identified sources of
35
36 strength in three domains, individual, interactional and contextual, but did not define
37
38 the strengths [47]. In a similar Chinese study, Duan and Ho (2017) used the VIA
39
40 theory of character strengths, but their three-dimensional model of strengths
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42 (temperance, intellectual, and interpersonal) was generalised to the non-clinical
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44 community [48].
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53 Our findings among breast cancer patients support the theoretical
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55 understanding of strengths [12]. Our study examined the viability of the popular VIA
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57 theory among a specific population in the Chinese context. The findings also extend
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4 the theoretical and empirical evidence for the VIA model to the population of patients
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6 with breast cancer in China. This compatibility and integration of strengths theory and
7
8 traditional values may make the VIA more than a conceptual tool. Although the
9
10 original VIA classification framework applied to a range of religions, philosophies
11
12 and cultures, the situational themes of strengths could be expressed in different life
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14 domains or specific contexts/situations [49]. In our study, the patients with breast
15
16 cancer were in a special context with various challenges. It is important to note that
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18 the VIA is still being refined, so the list of strengths may change accordingly [50].
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20 Therefore, further research is needed to test the VIA among breast cancer patients
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22 with various characteristics.
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32 **Clinical implications**

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35 It is important to emphasise the psychological strengths of breast cancer
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37 patients and their abilities related to their personal traits in a kind of individual-
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39 oriented salutogenic approach [36]. Strengths that are associated with positive
40
41 outcomes are those that link people together, such as gratitude, kindness, selflessness
42
43 and love. However, for nurses, psychological counsellors and other professionals,
44
45 further research is needed to optimise the description of strengths and evaluation for
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47 patients in China.
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53 To our knowledge, this is the first study to describe Chinese breast cancer
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55 patients' perceptions and experiences of character strengths. The findings indicate that
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57 character strength is a crucial psychological resource during patients' survivorship.
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Further research is needed to learn more about the strengths of a larger population of breast cancer patients with different backgrounds. In addition, strength identification and knowledge are only prerequisites. Using strengths is what leads to valuable outcomes. It is also necessary to explore strategies and interventions to help breast cancer patients mobilise their personal strengths. Strength-based practices adapted to Chinese breast cancer patients should be developed in clinical programmes.

Study limitations

Although we have provided some important findings on the strengths of breast cancer patients, this study has several limitations. First, the generalisability of the results is limited. The number of participants was small. The study hospital was a provincial hospital that admitted patients from central China. Second, the findings were based on the statements of the participants. Additional studies are needed to explore the generalisability of our findings. Another limitation may be the definition of character strengths. This study used the core descriptive elements provided by Peterson and Seligman (2004) [12]. Making use of a broader study of strengths could overcome this limitation, especially for those who are less familiar with character strengths and those who have difficulty in describing them. Replicating the study might increase its validity by allowing participants more time to become familiar with strengths and to speculate about expressions based on their individual experiences.

Conclusion

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4 This study revealed the obstacles encountered by breast cancer patients in
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6 describing their own strengths but proved that it is possible to uncover their character
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8 strengths. An evidence base is needed to optimise breast cancer patients' awareness of
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10 their strengths. Breast cancer patients' perceptions of character strengths are affected
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12 by various issues related to personal experience with breast cancer and cultural
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14 values. The participants in this study experienced better well-being and a greater
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16 sense of purpose in life due to character strengths that reconnected people. This study
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18 highlights the importance of cultural values to the construct of character strengths.
19
20 Finally, this study established a theoretically sound model for understanding and
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22 addressing strengths in Chinese clinical breast cancer care with clear, culturally
23
24 specific descriptions.
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41

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46 manuscript. CC contributed to the conception and design, interpretation and reviewed
47
48 the manuscript. PVB contributed to the analysis, interpretation and reviewed the
49
50 manuscript. CKM and LMZ contributed to the conception and design and reviewed
51
52 the manuscript. All authors have given final approval of the version to be published
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54 and agree to be accountable for all aspects of the work in ensuring that questions
55
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59
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7
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9

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References

- 1 Moyle W, Parker D, Bramble M. *Care of older adults. A strengths-based approach*. Sydney: : Cambridge University Press 2014.
- 2 Waterworth S, Raphael D, Gott M, *et al*. Uncovering strengths within community dwelling older adults: What does it mean for health care practice? *Heal Soc Care Community* 2019;:1–9. doi:10.1111/hsc.12924
- 3 Gottlieb LN, Gottlieb B. Strengths-Based Nursing: A Process for Implementing a Philosophy Into Practice. *J Fam Nurs* 2017;**23**:319–40. doi:10.1177/1074840717717731
- 4 Duan W, Bu H. Development and initial validation of a short three-dimensional inventory of character strengths. *Qual Life Res* 2017;**26**:2519–31. doi:10.1007/s11136-017-1579-4
- 5 Jeste D V., Palmer BW, Boardman S, *et al*. Integrating Positive Psychiatry Into Clinical Practice. In: *Positive Psychiatry*. 2015. doi:10.1176/appi.books.9781615370818.dj12
- 6 Park CL, Gaffey AE. Relationships between psychosocial factors and health behavior change in cancer survivors: An integrative review. *Ann Behav Med* 2007;**34**:115–34. doi:10.1007/BF02872667
- 7 Pieters HC. ‘i’m Still Here’: Resilience among older survivors of breast cancer. *Cancer Nurs* 2016;**39**:E20–8. doi:10.1097/NCC.0000000000000248

- 1
2
3
4 8 Rotegard AK, Fagermoen MS, Ruland CM. Cancer patients' experiences of
5
6 their personal strengths through illness and recovery. *Cancer Nurs* 2012;**35**:8–
7
8 17. doi:10.1097/NCC.0b013e3182116497
9
10
11 9 Niemiec R, Rashid T, Spinella M. Strong Mindfulness: Integrating Mindfulness
12
13 and Character Strengths. *J Ment Heal Couns* 2015;**34**:240–53.
14
15
16 doi:10.17744/mehc.34.3.34p6328x2v204v21
17
18
19 10 Fang SY, Lin YC, Chen TC, *et al.* Impact of marital coping on the relationship
20
21 between body image and sexuality among breast cancer survivors. *Support*
22
23 *Care Cancer* 2015;**23**:2551–9. doi:10.1007/s00520-015-2612-1
24
25
26
27 11 McGrath RE, Hall-Simmonds A, Goldberg LR. Are Measures of Character and
28
29 Personality Distinct? Evidence From Observed-Score and True-Score
30
31 Analyses. *Assessment* 2020;**27**:117–35. doi:10.1177/1073191117738047
32
33
34
35 12 Peterson C, Seligman ME. *Character strengths and virtues A handbook and*
36
37 *classification*. New York: : Oxford University Press 2004.
38
39
40 13 Seligman M. Flourish: a visionary new understanding of happiness and well-
41
42 being. In: *Choice Reviews Online*. 2011. 48-7217-48–7217.
43
44
45 doi:10.5860/choice.48-7217
46
47
48 14 Shimai S, Otake K, Park N, *et al.* Convergence of character strengths in
49
50 American and Japanese young adults. *J Happiness Stud* 2006;**7**:311–22.
51
52
53 doi:10.1007/s10902-005-3647-7
54
55
56
57
58
59
60

- 1
2
3
4 15 Baumann D, Ruch W, Margelisch K, *et al.* Character Strengths and Life
5
6 Satisfaction in Later Life: an Analysis of Different Living Conditions. *Appl Res*
7
8 *Qual Life* Published Online First: 2019. doi:10.1007/s11482-018-9689-x
9
10
11
12 16 Chan CWH, Chang AM. Stress associated with tasks for family caregivers of
13
14 patients with cancer in Hong Kong. *J Adv Nurs* 1999;**29**:484–9.
15
16 doi:10.1097/00002820-199908000-00002
17
18
19 17 So WKW, Choi KC, Chen JMT, *et al.* Quality of life in head and neck cancer
20
21 survivors at 1 year after treatment: the mediating role of unmet supportive care
22
23 needs. *Support Care Cancer* 2014;**22**:2917–26. doi:10.1007/s00520-014-2278-
24
25 0
26
27
28
29
30 18 Wagner L, Ruch W. Good character at school: Positive classroom behavior
31
32 mediates the link between character strengths and school achievement. *Front*
33
34 *Psychol* 2015;**6**:1-13. doi:10.3389/fpsyg.2015.00610
35
36
37
38 19 Lim YJ. Relations between virtues and positive mental health in a Korean
39
40 population: A Multiple Indicators Multiple Causes (MIMIC) model approach.
41
42 *Int J Psychol* 2015;**50**:272–8. doi:10.1002/ijop.12096
43
44
45
46 20 McGrath RE. Character strengths in 75 nations: An update. *J Posit Psychol*
47
48 2015;**10**:41–52. doi:10.1080/17439760.2014.888580
49
50
51 21 Hanks RA, Rapport LJ, Waldron-Perrine B, *et al.* Role of character strengths in
52
53 outcome after mild complicated to severe traumatic brain injury: A positive
54
55 psychology study. *Arch Phys Med Rehabil* 2014;**95**:2096–102.
56
57
58
59 doi:10.1016/j.apmr.2014.06.017
60

- 1
2
3
4 22 Macaskill A. Review of Positive Psychology Applications in Clinical Medical
5
6 Populations. *Healthcare* 2016;**4**:66. doi:10.3390/healthcare4030066
7
8
9 23 Yan T, Chan CWH, Chow KM, *et al.* A systematic review of the effects of
10
11 character strengths-based intervention on the psychological well-being of
12
13 patients suffering from chronic illnesses. *J Adv Nurs* 2020;**76**:1567–80.
14
15
16
17 doi:10.1111/jan.14356
18
19 24 Ruch W, Proyer RT. Mapping strengths into virtues: The relation of the 24
20
21 VIA-strengths to six ubiquitous virtues. *Front Psychol* 2015;**6**:1–12.
22
23
24
25 doi:10.3389/fpsyg.2015.00460
26
27 25 Markus HR, Kitayama S. Culture and the self: Implications for cognition,
28
29 emotion, and motivation. *Psychol Rev* 1991;**98**:224–53. doi:10.1037/0033-
30
31 295X.98.2.224
32
33
34
35 26 Chan CWH, Law BMH, So WKW, *et al.* Novel strategies on personalized
36
37 medicine for breast cancer treatment: An update. *Int J Mol Sci* 2017;**18**:2423.
38
39
40
41 doi:10.3390/ijms18112423
42
43 27 O’Brien BC, Harris IB, Beckman TJ, *et al.* Standards for reporting qualitative
44
45 research: A synthesis of recommendations. *Acad Med* 2014;**89**:1245–51.
46
47
48
49 doi:10.1097/ACM.0000000000000388
50
51 28 Lusardi P. Qualitative Research in Nursing: Advancing the Humanistic
52
53 Imperative. *Nurs Res* 1996;**45**:62. doi:10.1097/00006199-199601000-00014
54
55
56
57
58
59
60

- 1
2
3
4 29 Henderson PD, Gore S V., Davis BL, *et al.* African American women coping
5 with breast cancer: a qualitative analysis. *Oncol Nurs Forum* 2003;**30**:641–7.
6
7 doi:10.1188/03.ONF.641-647
8
9
10
11 30 Pitre NY, Myrick F. A view of nursing epistemology through reciprocal
12 interdependence: towards a reflexive way of knowing. *Nurs Philos* 2007;**8**:73–
13
14 84. doi:10.1111/j.1466-769X.2007.00298.x
15
16
17
18 31 Palinkas LA, Horwitz SM, Green CA, *et al.* Purposeful Sampling for
19
20 Qualitative Data Collection and Analysis in Mixed Method Implementation
21
22 Research. *Adm Policy Ment Heal Ment Heal Serv Res* 2015;**42**:533–44.
23
24
25
26
27
28
29
30 32 Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In:
31
32 *Analyzing qualitative data*. 2010. 173–94.
33
34
35
36
37
38 33 Barasteh S, Rassouli M, Parandeh A, *et al.* Palliative care in the health system
39
40 of Iran: A review of the present status and the future challenges. *Asian Pacific*
41
42 *J Cancer Prev* 2020;**21**:845–51. doi:10.31557/APJCP.2020.21.3.845
43
44
45
46 34 Fox DE, Quinn RR, James MT, *et al.* Social Support in the Peritoneal Dialysis
47
48 Experience: A Qualitative Descriptive Study. *Can J Kidney Heal Dis* 2020;**7**.
49
50
51
52
53
54 35 Sandelowski M. The problem of rigor in qualitative research. *ANS Adv Nurs*
55
56 *Sci* 1986;**8**:27–37. doi:10.1097/00012272-198604000-00005
57
58
59
60

- 1
2
3
4 36 Guse T, Hudson D. Psychological strengths and posttraumatic growth in the
5
6 successful reintegration of South African ex-offenders. *Int J Offender Ther*
7
8
9 *Comp Criminol* 2014;**58**:1449–65. doi:10.1177/0306624X13502299
10
11
12 37 Niemiec RM. *Character strengths interventions. A field guide for practitioners.*
13
14 Boston, MA: : Hogrefe Publishing 2018.
15
16
17 38 Li J. Humility in learning: A Confucian perspective. *J Moral Educ*
18
19 2016;**45**:147–65. doi:10.1080/03057240.2016.1168736
20
21
22 39 Guo Z. Chinese Confucian culture and the medical ethical tradition. *J Med*
23
24 *Ethics* 1995;**21**:239–46. doi:10.1136/jme.21.4.239
25
26
27 40 Tang X, Li Y, Duan W, *et al.* Character strengths lead to satisfactory
28
29 educational outcomes through strength use: A longitudinal analysis. *Front*
30
31 *Psychol* 2019;**10**:1-9. doi:10.3389/fpsyg.2019.01829
32
33
34
35 41 Ling M, Wang X, Ma Y, *et al.* A Review of the Current State of Hospice Care
36
37 in China. *Curr Oncol Rep* 2020;**22**:1–7. doi:10.1007/s11912-020-00959-y
38
39
40 42 Waters LE. Strength-based parenting and life satisfaction in teenagers. *Adv Soc*
41
42 *Sci Res J* 2015;**2**:158–173. doi:10.14738/assrj.211.1551
43
44
45 43 Spiegel D. Psychosocial aspects of breast cancer treatment. *Semin Oncol*
46
47 1997;**24**:S1-36-S1-47.
48
49
50 44 Moale AC, Rajasekhara S, Ueng W, *et al.* Educational intervention enhances
51
52 clinician awareness of Christian, Jewish, and Islamic teachings around end-of-
53
54 life care. *J Palliat Med* 2019;**22**:62–70. doi:10.1089/jpm.2018.0077
55
56
57
58
59
60

- 1
2
3
4 45 Lundman B, Aléx L, Jonsén E, *et al.* Inner strength-A theoretical analysis of
5
6 salutogenic concepts. *Int J Nurs Stud* 2010;**47**:251–60.
7
8
9 doi:10.1016/j.ijnurstu.2009.05.020
10
11
12 46 Roux G, Dingley C, Bush H. Inner Strength in Women: Metasynthesis of
13
14 Qualitative Findings in Theory Development. *J Theory Constr Test* 2002;**6**:86.
15
16
17 47 Janssen BM, Van Regenmortel T, Abma TA. Identifying sources of strength:
18
19 Resilience from the perspective of older people receiving long-term community
20
21 care. *Eur J Ageing* 2011;**8**:145–56. doi:10.1007/s10433-011-0190-8
22
23
24 48 Duan W, Ho SMY. Three-Dimensional Model of Strengths: Examination of
25
26 Invariance Across Gender, Age, Education Levels, and Marriage Status.
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41 50 Park N, Peterson C, Seligman MEP. Strengths of character and well-being. *J*
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Standards for Reporting Qualitative Research (SRQR)—checklist of items that should be included in reports of Qualitative studies

	Item No	Recommendation	Page No
Title and abstract			
Title	1	Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	1
Abstract	2	Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	2
Introduction			
Problem formulation	3	Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	4
Purpose or research question	4	Purpose of the study and specific objectives or questions	6
Methods			
Qualitative approach and research paradigm	5	Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/interpretivist) is also recommended; rationale ^b	7
Researcher characteristics and reflexivity	6	Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability	8
Context	7	Setting/site and salient contextual factors; rationale ^b	9
Sampling strategy	8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale ^b	7
Ethical issues pertaining to human subjects	9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	12
Data collection methods	10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale ^b	8
Data collection instruments and technologies	11	Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	9
Units of study	12	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	13
Data processing	13	Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/deidentification of excerpts	9

Data analysis	14	Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale ^b	10
Techniques to enhance trustworthiness	15	Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale ^b	12
(Table continues)			
Results /findings			
Synthesis and interpretation	16	Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	14-22
Links to empirical data	17	Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	16-18
Discussion			
Integration with prior work, implications, transferability, and contribution(s) to the field	18	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	22-25
Limitations	19	Trustworthiness and limitations of findings	27
Other			
Conflicts of interest	20	Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	29
Funding	21	Sources of funding and other support; role of funders in data collection, interpretation, and reporting	29

^aThe authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

^bThe rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Note: BC O'Brien, Harris, I. B. , Beckman, T. J. , Reed, D. A. , & Cook, D. A. . (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*, 89(9), 1245-1251.

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Experiences and perception of character strengths among patients with breast cancer in China: A qualitative study

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4 **·Experiences and perception of character strengths among patients**
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7 **with breast cancer in China: A qualitative study**
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Abstract

Objective To explore the patients' experiences on character strengths that Chinese patients experience after the diagnosis of breast cancer.

Design A qualitative, exploratory study using semi-structured interviews based on the patients' lived experience with diagnosed with breast cancer. Ethics approval was granted. Interviews were audio-recorded and transcribed verbatim. Values in Action Classification of Strengths provided conceptual framework for analysing strengths. Directed content analysis based on the classification of strengths and framework analysis were used to analyse transcribed data. The Standards for Reporting Qualitative Research (SRQR) guideline was followed.

Setting The Second Affiliated Hospital of Zhengzhou University and Henan Provincial Cancer Hospital in China.

Participants Adult patients over 18 years, diagnosed with breast cancer between October 2019 and December 2020 were recruited. We used purposive sample method to collected data from 24 participants diagnosed with breast cancer.

Results Six themes (virtues) emerged from our analysis. In addition, two new subthemes (character strengths) emerged in this study, selflessness and pragmatism respectively. Patients with breast cancer described a large repertoire of character strengths they used or wished for during survivorship, including gratitude, hope, humility, kindness, humor, honesty, and forgiveness. Cultural values (e.g. collectivism, familism, Confucianism and Buddhist beliefs) helped structure the experiences of Chinese patients' character strengths. Patients wanted their character strengths to be more noticed, appreciated and encouraged by others and reported their psychological trajectory of using personal strengths.

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3 **Conclusion** The findings indicated that patients with breast cancer believing character
4 strengths are important to them. Medical staff should pay more attention to motivating
5 and cultivating breast cancer patients' character strengths. Attention to make strength-
6 based practices workable in clinical health promotion programmes is necessary. The
7 healthcare system should develop tailored individualised psychological services that
8 specifically address patients' needs for the application of personalised character
9 strengths.
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21 **KEYWORDS**

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24 Breast cancer, character strengths, descriptive research, female, framework analysis,
25 psycho-oncology, well-being, individualised service
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30 **Strengths and limitations of this study**

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33 ▶ The qualitative design was used to explore the breast cancer patients' complex
34 experiences, beliefs and behaviours on character strengths.
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36 ▶ Semi structured individual interviews provided time and scope for participants to
37 give detailed information about their opinions regarding character strengths.
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39 ▶ As qualitative methods prohibit generalisation, despite the data saturation
40 achieved, there are results regarding transferability to other patients and different
41 settings that should be interpreted with caution.
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Introduction

Strength-based approaches are receiving increasing international attention [1], and are being applied to solve longitudinal clinical problems, such as promoting well-being and limiting ill-health [2]. Recognising and using individuals' strengths leads to positive outcomes, such as coping, recovery and greater meaning in life [3]. Instead of focusing on problems [4], researchers have proposed that character strengths should be incorporated into clinical practice to help clients enhance well-being [5]. Character is the positive and socially valued elements of personality, which have a moral component [6]. Character strengths are the core theme of positive psychology, and are a cluster of positive traits or dispositions manifested in values, thoughts, feelings, and behaviours. These personal strengths involve positive psychological qualities referring to the self, others and the world [7]. In one practical case, strength-based approaches were adopted by clinicians to help breast cancer patients deal with the continuing challenges of survivorship [8].

Problem-oriented health care methods often overlook patients' strengths. The character strengths of patients with breast cancer have consequently received little attention [9]. Moreover, the majority of studies on character strengths have been conducted in Western countries [9,10]. The experiences and perception of character strengths among patients with breast cancer vary contextually, and the results of previous studies may not be directly applicable to Chinese breast cancer patients due to their social and cultural differences from Western patients [11].

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4 Character strengths promote the individual's positive cognition, emotions, and
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6 behaviours. Concentrating on strengths allows individuals to focus on more than
7
8 avoiding distress or disorder [12]. Previous studies have demonstrated that character
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10 strengths are positively associated with quality of life, well-being, happiness and
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12 general health [13]. Evidence is increasing that people who use their strengths on a
13
14 regular basis have higher levels of well-being [14]. However, medical staff and
15
16 caregivers tend to underestimate the personal strengths of cancer patients [15].
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18 Standardised, problem-oriented care may diminish patients' chances of achieving the
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20 best possible recovery [16].
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30 **Theoretical framework**

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32 The most extensively researched model of character strengths is the Values in
33
34 Action Classification of Strengths and Virtues (VIA classification) [7]. The VIA
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36 classification is a theory-driven framework comprising 24-character strengths
37
38 conceptually organised as reflections of six virtues: wisdom, courage, humanity,
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40 justice, temperance and transcendence. Studies of different cultures have revealed
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42 character strengths in different populations, including adolescents [17], college
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44 students [18], adults [6] and the elderly [2]. The classification model has been
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46 validated in 75 nations, with each sample including at least 150 respondents; these
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48 findings suggest substantial cross-cultural similarity in strengths [19]. Virtues are
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50 classes of character strengths that show individual differences but relative cross-
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52 cultural stability [20]. The character strengths perspective has been recognised in the
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4 field of psychological counselling and rehabilitation as a way to understand
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6 psychosocial adaptation to chronic diseases, especially cancer [21]. Because chronic
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8 diseases manifest themselves through a wide variety of symptoms and functional
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10 limitations [22], the specific meaning of character strengths are likely to vary across
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12 specific illnesses, cultural contexts and individuals. The six core virtue categories are
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14 universal, but these strengths are based on theoretical foundations [23]. Given that
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16 culture plays an important role in individuals' values, assumptions and needs [24], the
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18 character strengths of breast cancer patients may have different meanings and
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20 manifestations across different cultures. Moreover, researchers have highlighted the
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22 specific differences in the mental functioning of patients with various diseases and
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24 that of healthy individuals [25]. Therefore, a study of the character strengths of breast
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26 cancer patients within the Chinese context is expected to further strengthen the
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28 theoretical VIA classification.
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38 The evidence so far indicates that character strengths are a helpful personal
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40 resource [2]. However, there is a gap in the literature concerning how breast cancer
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42 patients identify their own strengths and use them. The applicability of the VIA
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44 classification among Chinese breast cancer patients is still unclear. Cultural values,
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46 such as collectivism, the importance of family, Confucianism and Buddhism could
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48 strongly determine how character strengths are expressed and the associated
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50 behaviour patterns. For example, Confucianism is a uniquely Chinese cultural concept
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52 that influences the definition of character strengths. This means that cultural factors
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54 play an important role in the theory of strengths. In this study, we explore the
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4 experiences and perception of character strengths among Chinese women with breast
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6 cancer.
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10 11 **Methods**

12 13 **Study design and population**

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17 In this qualitative study, we use a descriptive and exploratory approach to
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19 uncover aspects of the experiences and perceptions of character strengths in Chinese
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21 women with breast cancer. Semi-structured individual interviews were conducted.
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23 The Standards for Reporting Qualitative Research (SRQR) were followed [26].
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27 The researchers used a maximum variation sampling method and purposive
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29 sampling technique to recruit participants to richly or densely describe the culture or
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31 phenomenon of interest [27]. Regarding the sample size, the recruitment of
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33 interviewees stopped when the data reached a saturation point, indicating that the
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35 phenomenon could be understood comprehensively without further recruitment. Data
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37 saturation was achieved through repetition and confirmation of the information
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39 obtained by participants, i.e. no new insights emerged from the interview data of the
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41 last two included participants [28].
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49 The inclusion criteria were as follows: the patients were (a) women with a
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51 confirmed diagnosis of breast cancer; (b) aged above 18 years old; (c) native Chinese;
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53 (d) willing to participate in the study and offer informed consent. The exclusion
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55 criteria were as follows: the patient suffered from (a) one or more other life-
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4 threatening diseases, or (b) psychosis (for example, delusional disorder,
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6 schizophrenia).

11 **Patient and public involvement**

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14 Patients and/or the public were not involved in the design, conduct, reporting or
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16 dissemination plans of this research.

22 **Data collection**

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24 We used semi-structured interviews to foster interactivity and dialogue [29].
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26 The instruments used in this study included a demographic data sheet and a semi-
27
28 structured interview guide. The demographic data sheet was devised to obtain
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30 information on the patient's age, marital status, educational level and types of breast
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32 cancer treatment. The interview guide was informed by the positive psychology
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34 model of character strengths and the previous literature. The interviews opened with a
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36 short introduction to the topic (e.g., a definition and explanation of 'character
37
38 strengths'). Each interview included eight questions designed to encourage discussion
39
40 on perceptions and beliefs about character strengths (Table 1). Pilot interviews were
41
42 conducted with three breast cancer patients to check the appropriateness of the
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44 interview process and the accessibility of the questions. The demographic data sheet
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46 took approximately five minutes to complete, and the whole interview took
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48 approximately 30 to 60 minutes.
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Participant recruitment and interviews were conducted in November and December 2019 in two provincial tertiary hospitals in mainland China. To ensure consistency, the same researcher conducted all of the interviews [30]. The participants were asked for reflections and conclusions to prevent misunderstandings or omissions. Data collection was performed using audiotape recording, supplemented with handwritten notes on non-verbal behaviours and impressions.

Table 1 Semi-structured interview guide used in this study

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1. From your perspective, what is your perception of character strengths?
 2. Can you share your experiences on your character strengths?
 3. Why did you use your character strengths?
 4. When you used your character strengths, were you more broadly interested in better understanding of yourself?
 5. What did you hope to achieve by your character strengths?
 6. What benefits did you expect to receive as a result of using your character strengths?
 7. In your opinion, what are the most important benefits or outcomes that have resulted from your character strengths?
 8. When you used your character strengths, were you looking for a solution to a specific problem or difficult situation?
 9. In what way(s) have your character strengths affected your daily life?
 10. In what way(s) have your character strengths help you met your expectations and/or needs?
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Data Analysis

Directed content analysis and framework analysis were used to analyse the data in an combination of inductive and deductive approaches [31]. The analysis took place in five stages: (1) Stage 1, Familiarisation: Immersion in the data by repeatedly reading transcriptions and making field notes; (2) Stage 2, Analytical framework development: Preparing key topics, identifying important themes and developing the

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4 thematic framework, (3) Stage 3, Indexing: Completing data structuring and pilot
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6 charting, refining and combining themes and sub-themes, (4) Stage 4, Charting:
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8 Drawing summary chart and transferring data into the framework matrix, and (5)
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10 Stage 5, Data mapping and interpreting: Comparing the analysis results to the original
11
12 data and explaining the relationship between codes, subthemes and themes [32]. The
13
14 VIA classification was used as the guiding framework for direct content analysis. This
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16 framework is described in Table 2. The findings were presented in a synthesised form
17
18 of themes (virtues) and sub-themes (character strengths). No particular data software
19
20 was used for coding or organisational purposes. We not only sought to establish a
21
22 critical and common sense understanding of the text, but also to analyse it beyond
23
24 personal experience. We also looked for embedded character strengths in the content.
25
26 The themes and sub-themes were collected in a Microsoft Excel spreadsheet, with
27
28 supporting descriptions and quotes. Demographic data were analysed using SPSS
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30 version 22.0 (SPSS, Inc., Chicago, IL) and descriptive statistics were obtained
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32 (frequencies, means, standard deviations and percentages).
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45 **Table 2** The Values in Action classification of virtues and character strengths

Virtues	Character strengths	Multiple descriptions, pronouns, and manifestations
1. Wisdom & Knowledge <i>Cognitive strengths related to attaining and using new knowledge</i>	Creativity Curiosity Judgment & Open-Mindedness	[originality, ingenuity, discovering new and innovative ways to do things, thinking of novel and productive ways to do things] [openness to experience, taking an interest in all of ongoing experience, enthusiastically exploring and discovering new things] [critical thinking, thinking things through and examining them from all sides]

	Love of Learning	[Relishing in the acquisition of new skills and knowledge, mastering new skills, topics, and bodies of knowledge]
	Perspective	[wisdom, providing wise counsel to others]
2. Courage <i>Emotional strengths that involve working hard to accomplish goals in the face of opposition</i>	Bravery	[valor, not withdrawing or shrinking from threat, challenge, difficulty, or pain]
	Perseverance	[persistence, finishing what one starts, industriousness, working hard to finish what is started]
	Honesty	[authenticity, integrity, speaking the truth and presenting oneself in a genuine and authentic way]
	Zest	[vitality, enthusiasm, vigor, energy, Approaching life with excitement and energy]
3. Humanity <i>Interpersonal strengths that involve developing relationships and caring for other people</i>	Capacity to Love and Be Loved	[Valuing close relations with others]
	Kindness	[generosity, doing favors, nurturance, care, compassion, altruistic love, being generous and doing good deeds]
	Social Intelligence	[emotional intelligence, personal intelligence, being aware of the motives and feelings of self and others, knowing how to adapt to different social situations]
4. Justice <i>Civic strengths related to be an integral part of a healthy community</i>	Teamwork	[citizenship, social responsibility, loyalty, Working collaboratively and well as member of a team or a group]
	Fairness	[Treating all people the same according to notions of fairness and justice and with impartiality]
	Leadership	[Effectively managing groups to complete activities, organizing group activities and seeing that they happen]
5. Temperance <i>Strengths related to the use of restraint in thoughts, emotions, and behavior</i>	Forgiveness & Mercy	[Forgiving those who have done wrong]
	Modesty & Humility	[Being modest and letting one's accomplishments speak for themselves]
	Prudence	[Being cautious about one's actions or choices; not saying or doing things that might later be regretted]
	Self-Regulation	[Regulating what one feels and does, self-control, Exercising self-control and discipline]
6. Transcendence <i>Strengths that provide meaning in life and exceed the limits of ordinary experience</i>	Appreciation of Beauty and Excellence	[awe, wonder, elevation, Noticing and admiring beauty and excellence, and/or skilled performance in all domains of everyday life]
	Gratitude	[Being aware of and thankful for the good things that happen]
	Hope	[optimism, future-mindedness, future orientation, Expecting the best in the future, and working actively to achieve it]

Humor	[playfulness, enjoying laughter and amusing others, liking to laugh and joke, bringing smiles to other people]
Religiousness & Spirituality	[faith, purpose, having beliefs about life that bring comfort, having coherent beliefs about the higher purpose and meaning of life]

Note. Terms in brackets are variants of the Character strength adapted from Peterson and Seligman (2004).

Trustworthiness

To increase the credibility of our findings, we used a peer checking process.

Discussion continued until a consensus was reached among the co-researchers [33].

Open dialogue and careful probing were used during the interviews to ensure that the information was reliable. To enhance transferability [34], we continued interviews until data saturation occurred, made clear and distinct descriptions of the content and presented rich information from the findings.

Ethics

All procedures were in accordance with the guidelines of the Research Ethics Committee of the University (CUHK Approval number: SBREC 19-114) and Joint Chinese University of Hong Kong–New Territories East Cluster Clinical Research Ethics Committee, reference number: 2019.429. A digital code was used to refer to each participant to maintain anonymity.

Results

Clinical and demographic characteristics

A total of 24 female breast cancer patients participated in the interviews. The average age of the participants was 52.54 years (range, 30–70 years). Table 3 outlines the participants' characteristics. Most of the participants had stage I/II breast cancer (66.7%), and the remainder (33.3%) had stage III/IV breast cancer. Seventeen participants (70.8%) had breast cancer in the left breast, five (20.8%) had cancer in the right breast and two (8.3%) had bilateral breast cancer.

Table 3 Demographic information and clinical data of the participants (N = 24)

Characteristics	Number	(%)
Age (years)		
Mean \pm SD	52.54 \pm 11.56	
Range	30-70	
Age <60	15	62.5
Age \geq 60	9	37.5
Marital status		
Married	21	87.5
Unmarried or widow	3	12.5
Occupation		
Employed	17	70.8
Unemployed	7	29.2
Education states		
Primary school and below	10	41.7
Junior school	4	16.7
Senior high school	7	29.2
Bachelor and above	3	12.5
Perceived Income		
Low	3	12.5
Middle	9	37.5
Good	7	29.2
High	5	20.8
Type of cancer		
Breast cancer	24	
Left	17	70.8
Right	5	20.8
Two sides	2	8.3

1			
2			
3	Stage of disease		
4	I/II	16	66.7
5	III/IV	8	33.3
6			
7	Time since diagnosis (months)		
8	Mean	8.63	
9			
10	Adjuvant therapy		
11	Only had surgery	10	41.7
12	Also had chemotherapy or radiation	14	58.3
13	therapy		
14			

15 *Note. Because of rounding, percentages may not total 100.*

21 **Character strengths identified within the VIA framework**

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 23
 24 The participants' main character strengths were consistent with the VIA
 25
 26 classification; they included cognitive strengths, emotional strengths, civic and
 27
 28 community strengths, interpersonal strengths, temperance strengths and transcendence
 29
 30 strengths. Table 4 summarises the character strengths of the breast cancer patients.
 31
 32 The original 24 strengths were identified in the findings, and two new strengths of
 33
 34 selflessness and pragmatism emerged in our study. The themes (virtues) and sub-
 35
 36 themes (strengths) are illustrated by sample quotes from the participants (Table 5).
 37
 38 The participants also gave their perceptions and comments on the outcomes and
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 40 expectations of identifying and using individual character strengths. In general, the
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 42 participants expressed improved self-awareness and a greater sense of purpose and
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 44 well-being.
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Table 4 Adapted from values in action classifications of character strengths

Virtues	Character strengths	Cultural adapted descriptions, pronouns, and manifestations
Cognitive strengths	Creativity	Ingenuity, doing things in innovative ways, thinking in innovative and unique ways; seeing things in different ways
	Curiosity	Interested in all experiences; motivated to discover and explore new things; want to learn about unknown objects, environments or experiences of others
	Judgment & Open-Mindedness	The ability to think, understand, analyze, discern or judge rationally, independently and comprehensively; thinking carefully; defensive thinking
	Love of Learning	Studious, be eager to learn, erudite, philomathic; mastering new skills; enjoy new knowledge, enjoy learning
	Perspective	Resourceful, wise, good at planning and handling things; excellent insight and vision, farsighted
Emotional strengths	Bravery	Fearless, courageous, heroic, resolute, brave and bold; not timid, not afraid of danger or difficulty, not shrinking back.
	Perseverance	Persevere to the end, no slackness, still persevere after repeated failures; hardworking, not give up halfway; diligent, industrious
	Honesty	True, honest; integrity, sincere and earnest, wholeheartedly; being true to oneself and others
	Zest	Enthusiastic about things or others; vigorous vitality; vividness in action, thought or expression, energetic
Interpersonal strengths	Capacity to Love and be Loved	Valuing close relations with others; give love to others, be loved by others; feel the warmth, happiness, satisfaction and beauty in love, friendship, family affection, fraternity and other deep emotions for people and things.
	Kindness	Benevolent, kind-hearted; generosity, nurturance, charitable; serving others without expectation
	Social Intelligence	Emotional intelligence, aware of the motives and feelings of oneself and others; knowing how to get along can make others comfortable
	Teamwork	Working collaboratively and well as member of a team or a group, unite and work together to get better results; loyalty to team or group and working well with others
Civic and community strengths	Fairness	Righteousness, uprightness; not afraid of the strong, not bullying the weak, stick to the right way; Treat everyone the same according to justice
	Leadership	Confucian leadership; influence others, improve the efficiency of the entire group and ensuring team harmony
	Selflessness^a	Dedication, not self-interested; proud to serve the collective people and ashamed to deviate from the people, proud of unity and mutual assistance, ashamed of self-interest; devotion to family and country.
Restrained and temperance strengths	Forgiveness & Mercy	Forgive, ignore the faults of others; tolerant, considerate; not to care about wrongdoing or to hold accountable; compassion
	Modesty & Humility	Modest, polite, humble; reserved, courteous, not exaggerating one's ability or value; no boasting or arrogance, not complacent; willing to accept criticism, and humbly ask people for advice.

	Prudence	Be cautious about actions or choices; solemnly, careful; dependable, stable, calm and not anxious in situations
	Self-Regulation	Self-control; disciplined, restraint; managing personal impulses, emotions, laziness and other bad habits
	Pragmatism^a	Believe practice leads to true knowledge and wealth, believe actions speak louder than words, try to be practical, realistic, committed to the reality
Transcendence strengths	Appreciation of Beauty and Excellence	Appreciate, awe, fascinate and admire the beauty and excellence, and/or all outstanding skills, treasures or people
	Gratitude	Being aware of and thankful for the good things that happened, grateful, moved by the virtues of others, grateful for the kindness and favors of others, and seek ways to return
	Hope	Optimism, positive future mindedness, full of confidence in what is going on, open-minded and have good wishes for the future
	Humor	Funny, humorous, playfulness and enjoy talking witty, bring laughter and amusement to others
	Religiousness & Spirituality	Faith, believe in religion, unwavering belief, a state of mind that has trust or trust in someone or something, extremely convinced of a certain thought, doctrine, and as a personal belief

^a Newly emerged themes in the current study

Table 5 Examples from the participants in character strengths, with their anonymous code number and age

Character strengths	Quotes
Creativity	I feel that I always think differently from others of my age. The way I look at things is different. I usually make some fresh and unique gadgets for the children at home (Participant 14, 45).
Curiosity	I'm interested in hearing gossip about what's going on between my neighbours and where my relatives have travelled, or finding out what grocery they recommend and where supermarkets are offering cheaper discounts. I'm interested in all these experiences and things, sort of curious (Participant 22, 53).
Judgment & Open-Mindedness	I think I'm older, but much wiser than when I was younger. I've been through a lot of things and I'm not so attached and concerned about everything. Nowadays, when things come up again, I think very rationally and calmly about what to do, unlike the young people who are so whiny (Participant 17, 47).
Love of Learning	I usually learn a new thing, that is, learn to dance the popular square dance to divert my attention. Recently I learnt to play new cellphone apps like Douyin and Kuaishou with my friends. I feel that I do not have time to be unhappy when learning new things (Participant 1, 48).
Perspective	My personality is very good, just love to study and love to work. I usually use two mobile phones to study, and all the recordings on the other mobile phone (Participant 11, 30).
Bravery	I think life is only a few decades, like a white horse passing a gap. Sooner or later, it is the same thing. The key is that you must think about it and look down on everything. This is the wisdom of survival (Participant 3, 54).
Perseverance	I think I dare to face these things myself. But my body is my own business, I must be brave (Participant 3, 54).
	My husband can feel that I am strong and persistent. Compared with others, the advantages my character brings is I can be a bit stronger against stress. (Participant 2,

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2		
3		67).
4		I worked very hard in my work unit before, just want to get a promotion next year.
5		Unexpectedly, this illness disrupted the plan (Participant 4, 32).
6	Honesty	I am an ordinary person, I'm just straight hearted, and then I just say what I think, that
7		is, I am honest and sincere (Participant 1, 48).
8	Zest	Because I am passionate about making friends in the square dance group, now I am
9		sick and many partners come to see me. I was encouraged when they came (Participant
10		10, 52).
11	Capacity to	I am filial to my parents-in-law and be a good daughter-in-law. After being sick, I am
12	Love and be	very happy and feel beloved to be taken care of after a long time. I feel that my
13	Loved	families support me and love me (Participant 1, 48).
14	Kindness	Then I never did anything bad. Then I felt like I was very nice. I was just being kind to
15		others. Repay grievances with virtue and be compassionate (Participant 1, 48).
16		I believe benevolent must be rewarded with kindness. I've always been a good person
17		(Participant 3, 54).
18	Social	Every time my family came, I said I was fine and did not want them to worry
19	Intelligence	(Participant 9, 65).
20	Teamwork	Three cobblers with their wits combined, equal Zhuge Liang the master mind-
21		collective wisdom often proves superior (two heads are better than one) (Participant 4,
22		32).
23		I used to work, and I can have a good relationship with my colleagues and
24		subordinates (Participant 11, 30).
25	Fairness	Any conflicts between them can be handled fairly no matter what I say. I got this
26		disease and I cannot do anything now (Participant 11, 30).
27	Leadership	I was also a small head in the unit before, and how to allocate jobs to everyone
28		harmoniously is also a skill, and it can improve the efficiency of the entire department
29		(Participant 12, 35).
30		I have made it to the position of department manager in my organisation and would not
31		have missed work had I not been ill. I had to get my people's affairs in order before I
32		was admitted to hospital (Participant 24, 37).
33		I feel that I am selfless. I have sacrificed my whole life, sacrificed for my family, and
34		cooperated with national policies. I feel that our generation pays more attention to the
35		collective and puts everyone's interests ahead of their own. This is also written in the
36	Selflessness	Eight Honors and Eight Shames (Participant 13, 60).
37		It is proud to serve the collective people and ashamed to deviate from the people. We
38		are proud of unity and mutual assistance, and ashamed of self-interest (Participant 16,
39		56).
40	Forgiveness &	Well, I think everyone is good, but many patients are now demanding and dissatisfied
41	Mercy	with the people around them. Sometimes they lose their temper at the small mistakes
42		of doctors and nurses. It is better to be tolerant and forgive like me (Participant 11, 30).
43	Modesty &	My family and patients still thought I was humble. I feel that my personality is simple,
44	Humility	and I get along well with everyone (Participant 5, 52).
45	Prudence	I take photographs of the bags of medication that I receive infusions of and the
46		medication that I take every day. I also keep the bill for each payment. I often talk to
47		my doctor about my condition and I think that being discreet will give me peace of
48		mind (Participant 23, 38).
49	Self-	I felt that my self-discipline was meaningful, so I strengthened my exercise.
50	Regulation	(Participant 8, 55).
51	Pragmatism	Practice brings real wealth, it speaks louder than words (Participant 3, 54).
52		I am a pragmatic person, I don't know how to say nice things. I do not afraid and have
53		no time to feel depressed. I do not want to worry about it. I just want to eat and drink
54		and do my work. I do not want anything else (Participant 2, 67)
55	Appreciation	I was reading a novel about the philosophy of life recently. I will read this book after
56	of Beauty and	treatment. I feel comfortable appreciating these beautiful things. I also appreciate the
57	Excellence	natural environment and feel better (Participant 12, 35).
58	Gratitude	Everyone, whether old or young, should know how to be grateful (Participant 1, 48).
59		I think the nurses here have given me a lot of help, and the doctors respect my ideas
60		and help me with treatment. I am very grateful to them. The services in the hospital are

	very good, so I feel very good (Participant 3, 54).
	I feel that the doctors, nurses and family members are very concerned about me. Everyone has a very good attitude. It is not easy for everyone to work and live. I have a lot of spiritual support. I am very grateful (Participant 11, 30).
Hope	My family is pampering me now, which is pretty good. My husband said that I have been optimistic in the past years. Well, I just want to be stronger anyway, everything will definitely get better (Participant 2, 67).
Humor	But sometimes when I chat with patients in the department, no matter what I say, everyone is very happy. It feels like I am everyone's pistachio. But I think I am more cute than humorous (Participant 5, 52).
Religiousness & Spirituality	Just to get better soon, and live a few more years, I have been chanting and believing in Buddha. My child also said that I had changed but felt that my mentality was much better and calmer after relying on faith and religion (Participant 7, 65).

Theme 1: Cognitive strengths

Cognitive strengths reflect wisdom, knowledge, exploration, openness and knowledge-seeking [7]. This theme involves five strengths: creativity, curiosity, judgment and open-mindedness, love of learning, and perspective. These subthemes reflect the manifestations of cognitive strengths based on wisdom, openness and knowledge. In response to unexpected situations or unfamiliar problems, the participants usually gave wise solutions. Some participants aided their recovery by reading about treatment and nursing skills, which also demonstrated their love of learning. Love of learning refers to cognitive engagement, mastering new skills and increasing existing knowledge [35]. Creativity refers to original and adaptive thought or behaviour. The narratives of the participants also reflected how they found new ways to deal with the familial and social problems encountered while receiving treatment.

Theme 2: Emotional strengths

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4 When the participants talked about their lives after breast cancer and the
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6 inherent difficulties they faced, they also showed the emotional strengths of courage,
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8 perseverance, honesty and enthusiasm. This theme involves four strengths: bravery,
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10 perseverance, honesty and zest. These subthemes reflect the Chinese manifestations of
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12 emotional strengths. Being brave means not shrinking from challenges [36]. For
13
14 example, some participants said that they dared to face physical damage after breast
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16 surgery and hair loss after chemotherapy. They felt that living was more important
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18 than these considerations. Bravery enabled self-determination and helped them
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20 actively persevere. Other participants said frankly that they told their family members
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22 about their fear of death, while emphasising that their family members remained
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24 encouraging and supportive.
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35 **Theme 3: Interpersonal strengths**

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37 Interpersonal strengths clearly reflect humanity and justice. They include love,
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39 kindness, social intelligence and developing relationships and caring for other people.
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41 This theme involves three strengths: capacity to love and be loved, kindness and
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43 social intelligence. Social intelligence is the awareness of the motives and feelings of
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45 oneself and others, and knowing how to adapt to different social situations [36]. This
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47 was demonstrated by many participants, especially patients who got along well with
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49 roommates and nurses during hospitalisation.
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58 **Theme 4: Civic and community strengths**

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4 Civic strengths are considered an integral part of a healthy community; they
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6 include teamwork, fairness and leadership. In our study, we also identified a fourth
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8 civic strength: selflessness. Teamwork refers to social responsibility and working
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10 collaboratively as a member of a team or group. Fairness involves treating people the
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12 same according to principles of justice. Selflessness refers to dedication, rather than
13
14 self-interest. This is a distinct cultural strength proposed by the Chinese participants
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16 in the study. Participants thought this was one of their strengths, which helped them
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18 obtain the respect of others and society.
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27 **Theme 5: Restraint and temperance strengths**

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30 Restraint and temperance strengths encompass forgiveness, modesty, prudence
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32 and self-regulation. In our study, this theme also contains a fifth strength: pragmatism.
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34 Modesty means an unwillingness to praise oneself and show off one's qualities or
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36 achievements [2,36]. In all of our interviews, when we first mentioned expressing
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38 personal strengths, the participants often avoided talking and reflected that humility is
39
40 a common occurrence. The participants were reluctant to talk about their own
41
42 achievements and character strengths. They thought that talking about this would
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44 violate their culture's respect for humility, and they were embarrassed. In contrast,
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46 they were more willing to admit that they had many shortcomings. Chinese Confucian
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48 view has evolved into the view that humility makes people grow, while complacency
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50 and pride make people degenerate [37]. Pragmatism is related to facts or practical
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52 matters, and usually excludes intellectual or artistic matters. Pragmatism is a new
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4 emergent subtheme, which means practicality rather than idealism. This is another
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6 distinctly Chinese strength that may be related to China's long period of construction
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8 and development.
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11 12 13 14 **Theme 6: Transcendence strengths**

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17 Transcendence strengths provide meaning in life and exceed the limits of
18
19 ordinary experience. This theme contains five strengths: appreciation of beauty and
20
21 excellence, gratitude, hope, humour, and religiousness and spirituality. Although the
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23 participants mentioned that their spirituality was related to Buddhism, it was more
24
25 about how they gained strength from their belief system and cultural values. These
26
27 strengths gave the participants guidelines, made them feel special, and enabled them
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29 to cope with the negative things in their life and treatment. Gratitude and spirituality
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31 were common strengths across all of the interviews. The participants mentioned that
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33 they tended to gain comfort from these strengths after their diagnosis, despite their
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35 physical weakness and psychological dysfunction.
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46 **Positive outcomes and expectations of identifying and using character strengths**

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48 Several subjective positive outcomes were frequently addressed by the
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50 participants in connection with the awareness of strengths. They included improved
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52 self-awareness, personal confidence and self-esteem, increased happiness, optimism, a
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54 greater sense of meaning in life, improved well-being and decreased distress. Better
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56 well-being and a sense of meaning were the most frequently addressed benefits
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(mentioned eleven times). In addition, in reference to these outcomes, most of the related strengths were those that involved reconnecting with people, such as gratitude, kindness, selflessness and love. The most frequently quoted proverb was ‘good people get rewards’ (mentioned eight times); that is, they felt that if they did good deeds for others, their health and life would improve.

Discussion

The patients with breast cancer in this study described a large repertoire of character strengths they used or wished for during survivorship. In line with previous studies [2], most of the themes and sub-themes coded in this study were in line with VIA. Two more strengths — selflessness and pragmatism — emerged. Cultural values and culture (e.g., collectivism, importance of family, Confucianism and Buddhism) helped structure the participants strengths and influenced their descriptions.

In our study, the participants with breast cancer did not differ from the healthy individuals studied in the previous literature in terms of transcendence strengths (appreciation of beauty and excellence, religiousness, spirituality) and cognitive strengths (wisdom and knowledge). These are potential characteristics of breast cancer patients that they can use when experiencing life and treatment events. These results are reflected in traditional palliative care or existing psychosocial programmes for breast cancer patients, in which patients are taught to express appropriate emotion and improve their problem-solving skills as part of the recovery process [38]. The

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4 breast cancer patients in this study experienced a similar appreciation of beauty. They
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6 appreciated excellence in all areas of life (art, nature and daily life) and in other
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8 people. They had coherent beliefs about truth and life independent of their disease and
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10 treatment.
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14 The experiences of emotional strengths, interpersonal strengths, civic and
15
16 community strengths, restrained and temperance strengths, and other types of strength
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18 are significantly influenced by breast cancer and cultural values. Kindness and
19
20 gratitude are associated with positive affect [36], and were the character strengths
21
22 most frequently expressed by the participants. Studies have consistently shown that
23
24 strengths of the heart, such as kindness and gratitude, are more strongly associated
25
26 with well-being than individual strengths, such as creativity and leadership. The other
27
28 character strengths most frequently mentioned by the participants were love,
29
30 selflessness, honesty, modesty and hope. This coincides with the perception of
31
32 character in Chinese culture. Chinese people have inherited the Confucian emphasis
33
34 on the cultivation of good character traits, like benevolence and kindness [39].
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36 Kindness and fairness are the important characteristics in the traditional culture of
37
38 benevolence and righteousness. Some of the participants emphasised that their belief
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40 in Buddhism and religious practice made them feel much calmer during their breast
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42 cancer episode, and they felt that their spirit and beliefs gave them hope and gave life
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44 new meaning. This finding also suggests that spirituality/religiousness is related to
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46 meaning and goals in life [40].
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4 Concepts also need to be understood within the prevailing sociocultural and
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6 political context [41]. The two newly emerging strengths are influenced by
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8 contemporary culture and policies. Selflessness refers to the characteristic Chinese
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10 concept that people should not be self-interested, be proud to serve the collective and
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12 ashamed to deviate from it, and strive for unity. Pragmatism emphasises beliefs that
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14 practice will lead to true knowledge and wealth; it has been strengthened by modern
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16 development policies.
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22 Throughout the research process, the participants had difficulty identifying
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24 and talking about their strengths. This may demonstrate their strength of modesty.
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26 Such humbleness could be influenced by Chinese Confucian culture [39]. Other
27
28 studies have also identified this barrier to the expression of strengths [2]. The
29
30 challenges encountered by our participants in transforming their strengths into
31
32 descriptive language may reflect their need for more opportunities for self-awareness
33
34 and self-reflection. Another possible explanation is the conceptual overlap between
35
36 strengths and cultural values. This overlap may lead people to underestimate their
37
38 capabilities [42] and their interpersonal and cognitive strengths. The participants also
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40 highlighted that they wanted their character strengths to be more noticed, appreciated
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42 and encouraged by others, such as family members and medical caregivers. Chinese
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44 culture emphasises the role of the family. The affairs of family members are usually
45
46 determined by the entire family [43]. In such a collectivist environment, individual
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48 character is often not valued. Interaction with physicians and nurses was also
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50 highlighted. The women's high respect for physicians and reliance on nurses led them
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4 to attach great importance to communication. The awareness and praise of personal
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6 character strengths by family members and medical caregivers enhanced their sense
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8 of self-esteem and well-being while living with breast cancer. One previous study
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10 similarly demonstrated that overcoming blindness to strengths could improve an
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12 individual's self-efficacy and self-confidence, which in turn could affect their well-
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14 being [44].
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22 **Theoretical considerations and implications**

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24 Although there are other current theories and frameworks based on strengths,
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26 they have a number of limitations; in contrast, VIA has achieved a wide range of
27
28 applications. Roux, Dingley and Bush (2002) introduced the theory of inner strength
29
30 and Lundman et al. (2010) offered a conceptual model of four core dimensions
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32 [45,46]. However, most related studies have been carried out on women. Expressions
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34 of inner strength at different ages and in different life circumstances take different
35
36 forms [41]. Janssen, Van Regenmortel, and Abma (2011) identified sources of
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38 strength in three domains, individual, interactional and contextual, but did not define
39
40 the strengths [47]. In a similar Chinese study, Duan and Ho (2017) used the VIA
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42 theory of character strengths, but their three-dimensional model of strengths
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44 (temperance, intellectual, and interpersonal) was generalised to the non-clinical
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46 community [48].
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56 Our findings among breast cancer patients support the theoretical
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58 understanding of strengths [7]. Our study examined the viability of the popular VIA
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4 theory among a specific population in the Chinese context. The findings also extend
5
6 the theoretical and empirical evidence for the VIA model to the population of patients
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8 with breast cancer in China. This compatibility and integration of strengths theory and
9
10 traditional values may make the VIA more than a conceptual tool. Although the
11
12 original VIA classification framework applied to a range of religions, philosophies
13
14 and cultures, the situational themes of strengths could be expressed in different life
15
16 domains or specific contexts/situations [48]. In our study, the patients with breast
17
18 cancer were in a special context with various challenges. It is important to note that
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20 the VIA is still being refined, so the list of strengths may change accordingly [49].
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22 Therefore, further research is needed to test the VIA among breast cancer patients
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24 with various characteristics.
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35 **Clinical implications**

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37 It is important to emphasise the psychological strengths of breast cancer
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39 patients and their abilities related to their personal traits in a kind of individual-
40
41 oriented salutogenic approach [35]. Strengths that are associated with positive
42
43 outcomes are those that link people together, such as gratitude, kindness, selflessness
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45 and love. However, for nurses, psychological counsellors and other professionals,
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47 further research is needed to optimise the description of strengths and evaluation for
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49 patients in China.
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56 To our knowledge, this is the first study to describe Chinese breast cancer
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58 patients' perceptions and experiences of character strengths. The findings indicate that
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4 character strength is a crucial psychological resource during patients' survivorship.
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7 Further research is needed to learn more about the strengths of a larger population of
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10 breast cancer patients with different backgrounds. In addition, strength identification
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12 and knowledge are only prerequisites. Using strengths is what leads to valuable
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14 outcomes. It is also necessary to explore strategies and interventions to help breast
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16 cancer patients mobilise their personal strengths. Strength-based practices adapted to
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18 Chinese breast cancer patients should be developed in clinical programmes.
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25 **Study limitations**

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27 Although we have provided some important findings on the strengths of breast
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29 cancer patients, this study has several limitations. First, the generalisability of the
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31 results is limited. The number of participants was small. The study hospital was a
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33 provincial hospital that admitted patients from central China. Second, the findings
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35 were based on the statements of the participants. Additional studies are needed to
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37 explore the generalisability of our findings. Another limitation may be the definition
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39 of character strengths. This study used the core descriptive elements provided by
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41 Peterson and Seligman (2004) [12]. Making use of a broader study of strengths could
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43 overcome this limitation, especially for those who are less familiar with character
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45 strengths and those who have difficulty in describing them. Replicating the study
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47 might increase its validity by allowing participants more time to become familiar with
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49 strengths and to speculate about expressions based on their individual experiences.
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Conclusion

This study revealed the obstacles encountered by breast cancer patients in describing their own strengths but proved that it is possible to uncover their character strengths. An evidence base is needed to optimise breast cancer patients' awareness of their strengths. Breast cancer patients' perceptions of character strengths are affected by various issues related to personal experience with breast cancer and cultural values. The participants in this study experienced better well-being and a greater sense of purpose in life due to character strengths that reconnected people. This study highlights the importance of cultural values to the construct of character strengths. Finally, this study established a theoretically sound model for understanding and addressing strengths in Chinese clinical breast cancer care with clear, culturally specific descriptions.

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9

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11 the design, conduct, reporting or dissemination plans of this research.
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13

14 **Patient consent for publication** A digital code was used to refer to each participant
15 to maintain anonymity. Patient consent for publication Consent obtained directly from
16 patient(s).
17
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20 Research Ethics Committee of the University (CUHK Approval number: SBREC 19-
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23 accordance with the ethical standards of the institutional research committee and with
24 the 1964 Helsinki declaration and its later amendments.
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37 **Data availability statement** Data are available on reasonable request.
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59
60

References

- 1 Moyle W, Parker D, Bramble M. *Care of older adults. A strengths-based approach*. Sydney: : Cambridge University Press 2014.
- 2 Waterworth S, Raphael D, Gott M, *et al*. Uncovering strengths within community dwelling older adults: What does it mean for health care practice? *Heal Soc Care Community* 2019;:1–9. doi:10.1111/hsc.12924
- 3 Gottlieb LN, Gottlieb B. Strengths-Based Nursing: A Process for Implementing a Philosophy Into Practice. *J Fam Nurs* 2017;**23**:319–40. doi:10.1177/1074840717717731
- 4 Duan W, Bu H. Development and initial validation of a short three-dimensional inventory of character strengths. *Qual Life Res* 2017;**26**:2519–31. doi:10.1007/s11136-017-1579-4
- 5 Jeste D V., Palmer BW, Boardman S, *et al*. Integrating Positive Psychiatry Into Clinical Practice. In: *Positive Psychiatry*. 2015. doi:10.1176/appi.books.9781615370818.dj12
- 6 McGrath RE, Hall-Simmonds A, Goldberg LR. Are Measures of Character and Personality Distinct? Evidence From Observed-Score and True-Score Analyses. *Assessment* 2020;**27**:117–35. doi:10.1177/1073191117738047
- 7 Peterson C, Seligman ME. *Character strengths and virtues A handbook and classification*. New York: : Oxford University Press 2004.
- 8 Pieters HC. ‘i’m Still Here’: Resilience among older survivors of breast cancer. *Cancer Nurs* 2016;**39**:E20–8. doi:10.1097/NCC.0000000000000248

- 1
2
3
4 9 Rotegard AK, Fagermoen MS, Ruland CM. Cancer patients' experiences of
5
6 their personal strengths through illness and recovery. *Cancer Nurs* 2012;**35**:8–
7
8 17. doi:10.1097/NCC.0b013e3182116497
9
10
11 10 Niemiec R, Rashid T, Spinella M. Strong Mindfulness: Integrating Mindfulness
12
13 and Character Strengths. *J Ment Heal Couns* 2015;**34**:240–53.
14
15
16 doi:10.17744/mehc.34.3.34p6328x2v204v21
17
18
19 11 Fang SY, Lin YC, Chen TC, *et al.* Impact of marital coping on the relationship
20
21 between body image and sexuality among breast cancer survivors. *Support*
22
23 *Care Cancer* 2015;**23**:2551–9. doi:10.1007/s00520-015-2612-1
24
25
26
27 12 Seligman M. Flourish: a visionary new understanding of happiness and well-
28
29 being. In: *Choice Reviews Online*. 2011. 48-7217-48–7217.
30
31
32 doi:10.5860/choice.48-7217
33
34
35 13 Shimai S, Otake K, Park N, *et al.* Convergence of character strengths in
36
37 American and Japanese young adults. *J Happiness Stud* 2006;**7**:311–22.
38
39
40 doi:10.1007/s10902-005-3647-7
41
42
43 14 Baumann D, Ruch W, Margelisch K, *et al.* Character Strengths and Life
44
45 Satisfaction in Later Life: an Analysis of Different Living Conditions. *Appl Res*
46
47 *Qual Life* Published Online First: 2019. doi:10.1007/s11482-018-9689-x
48
49
50 15 Chan CWH, Chang AM. Stress associated with tasks for family caregivers of
51
52 patients with cancer in Hong Kong. *J Adv Nurs* 1999;**29**:484–9.
53
54
55
56 doi:10.1097/00002820-199908000-00002
57
58
59
60

- 1
2
3
4 16 So WKW, Choi KC, Chen JMT, *et al.* Quality of life in head and neck cancer
5
6 survivors at 1 year after treatment: the mediating role of unmet supportive care
7
8 needs. *Support Care Cancer* 2014;**22**:2917–26. doi:10.1007/s00520-014-2278-
9
10 0
11
12
13
14 17 Wagner L, Ruch W. Good character at school: Positive classroom behavior
15
16 mediates the link between character strengths and school achievement. *Front*
17
18 *Psychol* 2015;**6**:1-13. doi:10.3389/fpsyg.2015.00610
19
20
21
22 18 Lim YJ. Relations between virtues and positive mental health in a Korean
23
24 population: A Multiple Indicators Multiple Causes (MIMIC) model approach.
25
26 *Int J Psychol* 2015;**50**:272–8. doi:10.1002/ijop.12096
27
28
29
30 19 McGrath RE. Character strengths in 75 nations: An update. *J Posit Psychol*
31
32 2015;**10**:41–52. doi:10.1080/17439760.2014.888580
33
34
35 20 Hanks RA, Rapport LJ, Waldron-Perrine B, *et al.* Role of character strengths in
36
37 outcome after mild complicated to severe traumatic brain injury: A positive
38
39 psychology study. *Arch Phys Med Rehabil* 2014;**95**:2096–102.
40
41 doi:10.1016/j.apmr.2014.06.017
42
43
44
45 21 Macaskill A. Review of Positive Psychology Applications in Clinical Medical
46
47 Populations. *Healthcare* 2016;**4**:66. doi:10.3390/healthcare4030066
48
49
50
51 22 Yan T, Chan CWH, Chow KM, *et al.* A systematic review of the effects of
52
53 character strengths-based intervention on the psychological well-being of
54
55 patients suffering from chronic illnesses. *J Adv Nurs* 2020;**76**:1567–80.
56
57 doi:10.1111/jan.14356
58
59
60

- 1
2
3
4 23 Ruch W, Proyer RT. Mapping strengths into virtues: The relation of the 24
5
6 VIA-strengths to six ubiquitous virtues. *Front Psychol* 2015;**6**:1–12.
7
8
9 doi:10.3389/fpsyg.2015.00460
10
11
12 24 Markus HR, Kitayama S. Culture and the self: Implications for cognition,
13
14 emotion, and motivation. *Psychol Rev* 1991;**98**:224–53. doi:10.1037/0033-
15
16 295X.98.2.224
17
18
19 25 Chan CWH, Law BMH, So WKW, *et al.* Novel strategies on personalized
20
21 medicine for breast cancer treatment: An update. *Int J Mol Sci* 2017;**18**:2423.
22
23 doi:10.3390/ijms18112423
24
25
26
27 26 O’Brien BC, Harris IB, Beckman TJ, *et al.* Standards for reporting qualitative
28
29 research: A synthesis of recommendations. *Acad Med* 2014;**89**:1245–51.
30
31 doi:10.1097/ACM.0000000000000388
32
33
34
35 27 Lusardi P. Qualitative Research in Nursing: Advancing the Humanistic
36
37 Imperative. *Nurs Res* 1996;**45**:62. doi:10.1097/00006199-199601000-00014
38
39
40 28 Henderson PD, Gore S V., Davis BL, *et al.* African American women coping
41
42 with breast cancer: a qualitative analysis. *Oncol Nurs Forum* 2003;**30**:641–7.
43
44 doi:10.1188/03.ONF.641-647
45
46
47
48 29 Pitre NY, Myrick F. A view of nursing epistemology through reciprocal
49
50 interdependence: towards a reflexive way of knowing. *Nurs Philos* 2007;**8**:73–
51
52 84. doi:10.1111/j.1466-769X.2007.00298.x
53
54
55
56 30 Palinkas LA, Horwitz SM, Green CA, *et al.* Purposeful Sampling for
57
58 Qualitative Data Collection and Analysis in Mixed Method Implementation
59
60

- 1
2
3
4 Research. *Adm Policy Ment Heal Ment Heal Serv Res* 2015;**42**:533–44.
5
6 doi:10.1007/s10488-013-0528-y
7
8
- 9 31 Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In:
10
11 *Analyzing qualitative data*. 2010. 173–94.
12
13 doi:10.4324/9780203413081_chapter_9
14
15
- 16 32 Barasteh S, Rassouli M, Parandeh A, *et al*. Palliative care in the health system
17
18 of Iran: A review of the present status and the future challenges. *Asian Pacific*
19
20 *J Cancer Prev* 2020;**21**:845–51. doi:10.31557/APJCP.2020.21.3.845
21
22
23
- 24 33 Fox DE, Quinn RR, James MT, *et al*. Social Support in the Peritoneal Dialysis
25
26 Experience: A Qualitative Descriptive Study. *Can J Kidney Heal Dis* 2020;**7**.
27
28 doi:10.1177/2054358120946572
29
30
31
- 32 34 Sandelowski M. The problem of rigor in qualitative research. *ANS Adv Nurs*
33
34 *Sci* 1986;**8**:27–37. doi:10.1097/00012272-198604000-00005
35
36
37
- 38 35 Guse T, Hudson D. Psychological strengths and posttraumatic growth in the
39
40 successful reintegration of South African ex-offenders. *Int J Offender Ther*
41
42 *Comp Criminol* 2014;**58**:1449–65. doi:10.1177/0306624X13502299
43
44
45
- 46 36 Niemiec RM. *Character strengths interventions. A field guide for practitioners*.
47
48 Boston, MA: : Hogrefe Publishing 2018.
49
50
- 51 37 Li J. Humility in learning: A Confucian perspective. *J Moral Educ*
52
53 2016;**45**:147–65. doi:10.1080/03057240.2016.1168736
54
55
- 56 38 Spiegel D. Psychosocial aspects of breast cancer treatment. *Semin Oncol*
57
58 1997;**24**:S1-36-S1-47.
59
60

- 1
2
3
4 39 Guo Z. Chinese Confucian culture and the medical ethical tradition. *J Med*
5
6 *Ethics* 1995;**21**:239–46. doi:10.1136/jme.21.4.239
7
8
9 40 Moale AC, Rajasekhara S, Ueng W, *et al.* Educational intervention enhances
10
11 clinician awareness of Christian, Jewish, and Islamic teachings around end-of-
12
13 life care. *J Palliat Med* 2019;**22**:62–70. doi:10.1089/jpm.2018.0077
14
15
16 41 Lundman B, Aléx L, Jonsén E, *et al.* Inner strength-A theoretical analysis of
17
18 salutogenic concepts. *Int J Nurs Stud* 2010;**47**:251–60.
19
20 doi:10.1016/j.ijnurstu.2009.05.020
21
22
23 42 Tang X, Li Y, Duan W, *et al.* Character strengths lead to satisfactory
24
25 educational outcomes through strength use: A longitudinal analysis. *Front*
26
27 *Psychol* 2019;**10**:1-9. doi:10.3389/fpsyg.2019.01829
28
29
30 43 Ling M, Wang X, Ma Y, *et al.* A Review of the Current State of Hospice Care
31
32 in China. *Curr Oncol Rep* 2020;**22**:1–7. doi:10.1007/s11912-020-00959-y
33
34
35 44 Waters LE. Strength-based parenting and life satisfaction in teenagers. *Adv Soc*
36
37 *Sci Res J* 2015;**2**:158–173. doi:10.14738/assrj.211.1551
38
39
40 45 Roux G, Dingley C, Bush H. Inner Strength in Women: Metasynthesis of
41
42 Qualitative Findings in Theory Development. *J Theory Constr Test* 2002;**6**:86.
43
44
45 46 Janssen BM, Van Regenmortel T, Abma TA. Identifying sources of strength:
46
47 Resilience from the perspective of older people receiving long-term community
48
49 care. *Eur J Ageing* 2011;**8**:145–56. doi:10.1007/s10433-011-0190-8
50
51
52
53
54
55
56
57
58
59
60

- 1
2
3
4 47 Duan W, Ho SMY. Three-Dimensional Model of Strengths: Examination of
5
6 Invariance Across Gender, Age, Education Levels, and Marriage Status.
7
8
9 *Community Ment Health J* 2017;**53**:233–40. doi:10.1007/s10597-016-0038-y
10
11 48 Niemiec RM. Six Functions of Character Strengths for Thriving at Times of
12
13 Adversity and Opportunity: a Theoretical Perspective. *Appl Res Qual Life*
14
15 2020;**15**:551–72. doi:10.1007/s11482-018-9692-2
16
17
18
19 49 Park N, Peterson C, Seligman MEP. Strengths of character and well-being. *J*
20
21 *Soc Clin Psychol* 2004;**23**:603–19. doi:10.1521/jscp.23.5.603.50748
22
23
24
25
26
27
28
29
30
31
32
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Standards for Reporting Qualitative Research (SRQR)—checklist of items that should be included in reports of Qualitative studies

	Item No	Recommendation	Page No
Title and abstract			
Title	1	Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	1
Abstract	2	Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	2
Introduction			
Problem formulation	3	Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	4
Purpose or research question	4	Purpose of the study and specific objectives or questions	6
Methods			
Qualitative approach and research paradigm	5	Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/interpretivist) is also recommended; rationale ^b	7
Researcher characteristics and reflexivity	6	Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability	8
Context	7	Setting/site and salient contextual factors; rationale ^b	9
Sampling strategy	8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale ^b	7
Ethical issues pertaining to human subjects	9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	12
Data collection methods	10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale ^b	8
Data collection instruments and technologies	11	Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	9
Units of study	12	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	13
Data processing	13	Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/deidentification of excerpts	9

Data analysis	14	Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale ^b	10
Techniques to enhance trustworthiness	15	Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale ^b	12
(Table continues)			
Results /findings			
Synthesis and interpretation	16	Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	14-22
Links to empirical data	17	Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	16-18
Discussion			
Integration with prior work, implications, transferability, and contribution(s) to the field	18	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	22-25
Limitations	19	Trustworthiness and limitations of findings	27
Other			
Conflicts of interest	20	Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	29
Funding	21	Sources of funding and other support; role of funders in data collection, interpretation, and reporting	29

^aThe authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

^bThe rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Note: BC O'Brien, Harris, I. B. , Beckman, T. J. , Reed, D. A. , & Cook, D. A. . (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*, 89(9), 1245-1251.

BMJ Open

Experiences and perception of character strengths among patients with breast cancer in China: A qualitative study

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Keywords:	Breast tumours < ONCOLOGY, Adult palliative care < PALLIATIVE CARE, PSYCHIATRY, QUALITATIVE RESEARCH, Adult psychiatry < PSYCHIATRY

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4 **·Experiences and perception of character strengths among patients**
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7 **with breast cancer in China: A qualitative study**
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Abstract

Objective To explore the patients' experiences on character strengths that Chinese patients experience after the diagnosis of breast cancer.

Design A qualitative, exploratory study using semi-structured interviews based on the patients' lived experience with diagnosed with breast cancer. Ethics approval was granted. Interviews were audio-recorded and transcribed verbatim. Values in Action Classification of Strengths provided conceptual framework for analysing strengths. Directed content analysis based on the classification of strengths and framework analysis were used to analyse transcribed data. The Standards for Reporting Qualitative Research (SRQR) guideline was followed.

Setting The Second Affiliated Hospital of Zhengzhou University and Henan Provincial Cancer Hospital in China.

Participants Adult patients over 18 years, diagnosed with breast cancer between October 2019 and December 2020 were recruited. We used purposive sample method to collected data from 24 participants diagnosed with breast cancer.

Results Six themes (virtues) emerged from our analysis. In addition, two new subthemes (character strengths) emerged in this study, selflessness and pragmatism respectively. Patients with breast cancer described a large repertoire of character strengths they used or wished for during survivorship, including gratitude, hope, humility, kindness, humor, honesty, and forgiveness. Cultural values (e.g. collectivism, familism, Confucianism and Buddhist beliefs) helped structure the experiences of Chinese patients' character strengths. Patients wanted their character strengths to be more noticed, appreciated and encouraged by others and reported their psychological trajectory of using personal strengths.

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3 **Conclusion** The findings indicated that patients with breast cancer believing character
4 strengths are important to them. Medical staff should pay more attention to motivating
5 and cultivating breast cancer patients' character strengths. Attention to make strength-
6 based practices workable in clinical health promotion programmes is necessary. The
7 healthcare system should develop tailored individualised psychological services that
8 specifically address patients' needs for the application of personalised character
9 strengths.
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21 **KEYWORDS**

22
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24 Breast cancer, character strengths, descriptive research, female, framework analysis,
25 psycho-oncology, well-being, individualised service
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30 **Strengths and limitations of this study**

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33 ▶ The qualitative design was used to explore the breast cancer patients' complex
34 experiences, beliefs and behaviours on character strengths.
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37 ▶ Semi structured individual interviews provided time and scope for participants to
38 give detailed information about their opinions regarding character strengths.
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41 ▶ As qualitative methods prohibit generalisation, despite the data saturation
42 achieved, there are results regarding transferability to other patients and different
43 settings that should be interpreted with caution.
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Introduction

Strength-based approaches are receiving increasing international attention [1], and are being applied to solve longitudinal clinical problems, such as promoting well-being and limiting ill-health [2]. Recognising and using individuals' strengths leads to positive outcomes, such as coping, recovery and greater meaning in life [3]. Instead of focusing on problems [4], researchers have proposed that character strengths should be incorporated into clinical practice to help clients enhance well-being [5]. Character is the positive and socially valued elements of personality, which have a moral component [6]. Character strengths are the core theme of positive psychology, and are a cluster of positive traits or dispositions manifested in values, thoughts, feelings, and behaviours. These personal strengths involve positive psychological qualities referring to the self, others and the world [7]. In one practical case, strength-based approaches were adopted by clinicians to help breast cancer patients deal with the continuing challenges of survivorship [8].

Character strengths promote the individual's positive cognition, emotions, and behaviours. Concentrating on strengths allows individuals to focus on more than avoiding distress or disorder [9]. Previous studies have demonstrated that character strengths are positively associated with quality of life, well-being, happiness and general health [10]. Evidence is increasing that people who use their strengths on a regular basis have higher levels of well-being [11]. However, medical staff and caregivers tend to underestimate the personal strengths of cancer patients [12].

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4 Standardised, problem-oriented care may diminish patients' chances of achieving the
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6 best possible recovery [13].
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9 Problem-oriented health care methods often overlook patients' strengths. The
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11 character strengths of patients with breast cancer have consequently received little
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13 attention [14]. Moreover, the majority of studies on character strengths have been
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15 conducted in Western countries [14,15]. The experiences and perception of character
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17 strengths among patients with breast cancer vary contextually, and the results of
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19 previous studies may not be directly applicable to Chinese breast cancer patients due
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21 to their social and cultural differences from Western patients [16].
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30 **Theoretical framework**

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32 The most extensively researched model of character strengths is the Values in
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34 Action Classification of Strengths and Virtues (VIA classification) [7]. The VIA
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36 classification is a theory-driven framework comprising 24-character strengths
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38 conceptually organised as reflections of six virtues: wisdom, courage, humanity,
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40 justice, temperance and transcendence. Studies of different cultures have revealed
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42 character strengths in different populations, including adolescents [17], college
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44 students [18], adults [6] and the elderly [2]. The classification model has been
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46 validated in 75 nations, with each sample including at least 150 respondents; these
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48 findings suggest substantial cross-cultural similarity in strengths [19]. Virtues are
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50 classes of character strengths that show individual differences but relative cross-
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52 cultural stability [20]. The character strengths perspective has been recognised in the
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4 field of psychological counselling and rehabilitation as a way to understand
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6 psychosocial adaptation to chronic diseases, especially cancer [21]. Because chronic
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8 diseases manifest themselves through a wide variety of symptoms and functional
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10 limitations [22], the specific meaning of character strengths are likely to vary across
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12 specific illnesses, cultural contexts and individuals. The six core virtue categories are
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14 universal, but these strengths are based on theoretical foundations [23]. Given that
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16 culture plays an important role in individuals' values, assumptions and needs [24], the
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18 character strengths of breast cancer patients may have different meanings and
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20 manifestations across different cultures. Moreover, researchers have highlighted the
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22 specific differences in the mental functioning of patients with various diseases and
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24 that of healthy individuals [25]. Therefore, a study of the character strengths of breast
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26 cancer patients within the Chinese context is expected to further strengthen the
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28 theoretical VIA classification.
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38 The evidence so far indicates that character strengths are a helpful personal
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40 resource [2]. However, there is a gap in the literature concerning how breast cancer
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42 patients identify their own strengths and use them. The applicability of the VIA
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44 classification among Chinese breast cancer patients is still unclear. Cultural values,
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46 such as collectivism, the importance of family, Confucianism and Buddhism could
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48 strongly determine how character strengths are expressed and the associated
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50 behaviour patterns. For example, Confucianism is a uniquely Chinese cultural concept
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52 that influences the definition of character strengths. This means that cultural factors
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54 play an important role in the theory of strengths. In this study, we explore the
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4 experiences and perception of character strengths among Chinese women with breast
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6 cancer.
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10 11 **Methods**

12 13 **Study design and population**

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17 In this qualitative study, we use a descriptive and exploratory approach to
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19 uncover aspects of the experiences and perceptions of character strengths in Chinese
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21 women with breast cancer. Semi-structured individual interviews were conducted.
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23 The Standards for Reporting Qualitative Research (SRQR) were followed [26].
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27 The researchers used a maximum variation sampling method and purposive
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29 sampling technique to recruit participants to richly or densely describe the culture or
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31 phenomenon of interest [27]. Regarding the sample size, the recruitment of
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33 interviewees stopped when the data reached a saturation point, indicating that the
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35 phenomenon could be understood comprehensively without further recruitment. Data
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37 saturation was achieved through repetition and confirmation of the information
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39 obtained by participants, i.e. no new insights emerged from the interview data of the
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41 last two included participants [28].
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49 The inclusion criteria were as follows: the patients were (a) women with a
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51 confirmed diagnosis of breast cancer; (b) aged above 18 years old; (c) native Chinese;
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53 (d) willing to participate in the study and offer informed consent. The exclusion
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55 criteria were as follows: the patient suffered from (a) one or more other life-
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4 threatening diseases, or (b) psychosis (for example, delusional disorder,
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6 schizophrenia).

11 **Patient and public involvement**

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14 Patients and/or the public were not involved in the design, conduct, reporting or
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16 dissemination plans of this research.

22 **Data collection**

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24 We used semi-structured interviews to foster interactivity and dialogue [29].
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26 The instruments used in this study included a demographic data sheet and a semi-
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28 structured interview guide. The demographic data sheet was devised to obtain
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30 information on the patient's age, marital status, educational level and types of breast
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32 cancer treatment. The interview guide was informed by the positive psychology
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34 model of character strengths and the previous literature. The interviews opened with a
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36 short introduction to the topic (e.g., a definition and explanation of 'character
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38 strengths'). Each interview included ten questions designed to encourage discussion
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40 on perceptions and beliefs about character strengths (Table 1). Pilot interviews were
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42 conducted with three breast cancer patients to check the appropriateness of the
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44 interview process and the accessibility of the questions. The demographic data sheet
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46 took approximately five minutes to complete, and the whole interview took
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48 approximately 30 to 60 minutes.
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Participant recruitment and interviews were conducted in November and December 2019 in two provincial tertiary hospitals in mainland China. To ensure consistency, the same researcher conducted all of the interviews [30]. The participants were asked for reflections and conclusions to prevent misunderstandings or omissions. Data collection was performed using audiotape recording, supplemented with handwritten notes on non-verbal behaviours and impressions.

Table 1 Semi-structured interview guide used in this study

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1. From your perspective, what is your perception of character strengths?
 2. Can you share your experiences on your character strengths?
 3. Why did you use your character strengths?
 4. When you used your character strengths, were you more broadly interested in better understanding of yourself?
 5. What did you hope to achieve by your character strengths?
 6. What benefits did you expect to receive as a result of using your character strengths?
 7. In your opinion, what are the most important benefits or outcomes that have resulted from your character strengths?
 8. When you used your character strengths, were you looking for a solution to a specific problem or difficult situation?
 9. In what way(s) have your character strengths affected your daily life?
 10. In what way(s) have your character strengths help you met your expectations and/or needs?
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Data Analysis

Directed content analysis and framework analysis were used to analyse the data in an combination of inductive and deductive approaches [31]. The analysis took place in five stages: (1) Stage 1, Familiarisation: Immersion in the data by repeatedly reading transcriptions and making field notes; (2) Stage 2, Analytical framework development: Preparing key topics, identifying important themes and developing the

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4 thematic framework, (3) Stage 3, Indexing: Completing data structuring and pilot
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6 charting, refining and combining themes and sub-themes, (4) Stage 4, Charting:
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8 Drawing summary chart and transferring data into the framework matrix, and (5)
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10 Stage 5, Data mapping and interpreting: Comparing the analysis results to the original
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12 data and explaining the relationship between codes, subthemes and themes [32]. The
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14 VIA classification was used as the guiding framework for direct content analysis. This
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16 framework is described in Table 2. The findings were presented in a synthesised form
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18 of themes (virtues) and sub-themes (character strengths). No particular data software
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20 was used for coding or organisational purposes. We not only sought to establish a
21
22 critical and common sense understanding of the text, but also to analyse it beyond
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24 personal experience. We also looked for embedded character strengths in the content.
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26 The themes and sub-themes were collected in a Microsoft Excel spreadsheet, with
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28 supporting descriptions and quotes. Demographic data were analysed using SPSS
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30 version 22.0 (SPSS, Inc., Chicago, IL) and descriptive statistics were obtained
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32 (frequencies, means, standard deviations and percentages).
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45 **Table 2** The Values in Action classification of virtues and character strengths

Virtues	Character strengths	Multiple descriptions, pronouns, and manifestations
1. Wisdom & Knowledge <i>Cognitive strengths related to attaining and using new knowledge</i>	Creativity Curiosity Judgment & Open-Mindedness	[originality, ingenuity, discovering new and innovative ways to do things, thinking of novel and productive ways to do things] [openness to experience, taking an interest in all of ongoing experience, enthusiastically exploring and discovering new things] [critical thinking, thinking things through and examining them from all sides]

	Love of Learning	[Relishing in the acquisition of new skills and knowledge, mastering new skills, topics, and bodies of knowledge]
	Perspective	[wisdom, providing wise counsel to others]
2. Courage <i>Emotional strengths that involve working hard to accomplish goals in the face of opposition</i>	Bravery	[valor, not withdrawing or shrinking from threat, challenge, difficulty, or pain]
	Perseverance	[persistence, finishing what one starts, industriousness, working hard to finish what is started]
	Honesty	[authenticity, integrity, speaking the truth and presenting oneself in a genuine and authentic way]
	Zest	[vitality, enthusiasm, vigor, energy, Approaching life with excitement and energy]
3. Humanity <i>Interpersonal strengths that involve developing relationships and caring for other people</i>	Capacity to Love and Be Loved	[Valuing close relations with others]
	Kindness	[generosity, doing favors, nurturance, care, compassion, altruistic love, being generous and doing good deeds]
	Social Intelligence	[emotional intelligence, personal intelligence, being aware of the motives and feelings of self and others, knowing how to adapt to different social situations]
4. Justice <i>Civic strengths related to be an integral part of a healthy community</i>	Teamwork	[citizenship, social responsibility, loyalty, Working collaboratively and well as member of a team or a group]
	Fairness	[Treating all people the same according to notions of fairness and justice and with impartiality]
	Leadership	[Effectively managing groups to complete activities, organizing group activities and seeing that they happen]
5. Temperance <i>Strengths related to the use of restraint in thoughts, emotions, and behavior</i>	Forgiveness & Mercy	[Forgiving those who have done wrong]
	Modesty & Humility	[Being modest and letting one's accomplishments speak for themselves]
	Prudence	[Being cautious about one's actions or choices; not saying or doing things that might later be regretted]
	Self-Regulation	[Regulating what one feels and does, self-control, Exercising self-control and discipline]
6. Transcendence <i>Strengths that provide meaning in life and exceed the limits of ordinary experience</i>	Appreciation of Beauty and Excellence	[awe, wonder, elevation, Noticing and admiring beauty and excellence, and/or skilled performance in all domains of everyday life]
	Gratitude	[Being aware of and thankful for the good things that happen]
	Hope	[optimism, future-mindedness, future orientation, Expecting the best in the future, and working actively to achieve it]

Humor	[playfulness, enjoying laughter and amusing others, liking to laugh and joke, bringing smiles to other people]
Religiousness & Spirituality	[faith, purpose, having beliefs about life that bring comfort, having coherent beliefs about the higher purpose and meaning of life]

Note. Terms in brackets are variants of the Character strength adapted from Peterson and Seligman (2004).

Trustworthiness

To increase the credibility of our findings, we used a peer checking process.

Discussion continued until a consensus was reached among the co-researchers [33].

Open dialogue and careful probing were used during the interviews to ensure that the information was reliable. To enhance transferability [34], we continued interviews until data saturation occurred, made clear and distinct descriptions of the content and presented rich information from the findings.

Ethics

All procedures were in accordance with the guidelines of the Research Ethics Committee of the University (CUHK Approval number: SBREC 19-114) and Joint Chinese University of Hong Kong–New Territories East Cluster Clinical Research Ethics Committee, reference number: 2019.429. A digital code was used to refer to each participant to maintain anonymity.

Results

Clinical and demographic characteristics

A total of 24 female breast cancer patients participated in the interviews. The average age of the participants was 52.54 years (range, 30–70 years). Table 3 outlines the participants' characteristics. Most of the participants had stage I/II breast cancer (66.7%), and the remainder (33.3%) had stage III/IV breast cancer. Seventeen participants (70.8%) had breast cancer in the left breast, five (20.8%) had cancer in the right breast and two (8.3%) had bilateral breast cancer.

Table 3 Demographic information and clinical data of the participants (N = 24)

Characteristics	Number	(%)
Age (years)		
Mean \pm SD	52.54 \pm 11.56	
Range	30-70	
Age <60	15	62.5
Age \geq 60	9	37.5
Marital status		
Married	21	87.5
Unmarried or widow	3	12.5
Occupation		
Employed	17	70.8
Unemployed	7	29.2
Education states		
Primary school and below	10	41.7
Junior school	4	16.7
Senior high school	7	29.2
Bachelor and above	3	12.5
Perceived Income		
Low	3	12.5
Middle	9	37.5
Good	7	29.2
High	5	20.8
Type of cancer		
Breast cancer	24	
Left	17	70.8
Right	5	20.8
Two sides	2	8.3

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3	Stage of disease		
4	I/II	16	66.7
5	III/IV	8	33.3
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7	Time since diagnosis (months)		
8	Mean	8.63	
9			
10	Adjuvant therapy		
11	Only had surgery	10	41.7
12	Also had chemotherapy or radiation	14	58.3
13	therapy		
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15 *Note. Because of rounding, percentages may not total 100.*

21 **Character strengths identified within the VIA framework**

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 24 The participants' main character strengths were consistent with the VIA
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 26 classification; they included cognitive strengths, emotional strengths, civic and
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 28 community strengths, interpersonal strengths, temperance strengths and transcendence
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 30 strengths. Table 4 summarises the character strengths of the breast cancer patients.
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 32 The original 24 strengths were identified in the findings, and two new strengths of
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 34 selflessness and pragmatism emerged in our study. The themes (virtues) and sub-
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 36 themes (strengths) are illustrated by sample quotes from the participants (Table 5).
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 38 The participants also gave their perceptions and comments on the outcomes and
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 40 expectations of identifying and using individual character strengths. In general, the
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 42 participants expressed improved self-awareness and a greater sense of purpose and
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 44 well-being.
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Table 4 Adapted from values in action classifications of character strengths

Virtues	Character strengths	Cultural adapted descriptions, pronouns, and manifestations
Cognitive strengths	Creativity	Ingenuity, doing things in innovative ways, thinking in innovative and unique ways; seeing things in different ways
	Curiosity	Interested in all experiences; motivated to discover and explore new things; want to learn about unknown objects, environments or experiences of others
	Judgment & Open-Mindedness	The ability to think, understand, analyze, discern or judge rationally, independently and comprehensively; thinking carefully; defensive thinking
	Love of Learning	Studious, be eager to learn, erudite, philomathic; mastering new skills; enjoy new knowledge, enjoy learning
	Perspective	Resourceful, wise, good at planning and handling things; excellent insight and vision, farsighted
Emotional strengths	Bravery	Fearless, courageous, heroic, resolute, brave and bold; not timid, not afraid of danger or difficulty, not shrinking back.
	Perseverance	Persevere to the end, no slackness, still persevere after repeated failures; hardworking, not give up halfway; diligent, industrious
	Honesty	True, honest; integrity, sincere and earnest, wholeheartedly; being true to oneself and others
	Zest	Enthusiastic about things or others; vigorous vitality; vividness in action, thought or expression, energetic
Interpersonal strengths	Capacity to Love and be Loved	Valuing close relations with others; give love to others, be loved by others; feel the warmth, happiness, satisfaction and beauty in love, friendship, family affection, fraternity and other deep emotions for people and things.
	Kindness	Benevolent, kind-hearted; generosity, nurturance, charitable; serving others without expectation
	Social Intelligence	Emotional intelligence, aware of the motives and feelings of oneself and others; knowing how to get along can make others comfortable
	Teamwork	Working collaboratively and well as member of a team or a group, unite and work together to get better results; loyalty to team or group and working well with others
Civic and community strengths	Fairness	Righteousness, uprightness; not afraid of the strong, not bullying the weak, stick to the right way; Treat everyone the same according to justice
	Leadership	Confucian leadership; influence others, improve the efficiency of the entire group and ensuring team harmony
	Selflessness^a	Dedication, not self-interested; proud to serve the collective people and ashamed to deviate from the people, proud of unity and mutual assistance, ashamed of self-interest; devotion to family and country.
Restrained and temperance strengths	Forgiveness & Mercy	Forgive, ignore the faults of others; tolerant, considerate; not to care about wrongdoing or to hold accountable; compassion
	Modesty & Humility	Modest, polite, humble; reserved, courteous, not exaggerating one's ability or value; no boasting or arrogance, not complacent; willing to accept criticism, and humbly ask people for advice.

	Prudence	Be cautious about actions or choices; solemnly, careful; dependable, stable, calm and not anxious in situations
	Self-Regulation	Self-control; disciplined, restraint; managing personal impulses, emotions, laziness and other bad habits
	Pragmatism^a	Believe practice leads to true knowledge and wealth, believe actions speak louder than words, try to be practical, realistic, committed to the reality
Transcendence strengths	Appreciation of Beauty and Excellence	Appreciate, awe, fascinate and admire the beauty and excellence, and/or all outstanding skills, treasures or people
	Gratitude	Being aware of and thankful for the good things that happened, grateful, moved by the virtues of others, grateful for the kindness and favors of others, and seek ways to return
	Hope	Optimism, positive future mindedness, full of confidence in what is going on, open-minded and have good wishes for the future
	Humor	Funny, humorous, playfulness and enjoy talking witty, bring laughter and amusement to others
	Religiousness & Spirituality	Faith, believe in religion, unwavering belief, a state of mind that has trust or trust in someone or something, extremely convinced of a certain thought, doctrine, and as a personal belief

^a Newly emerged themes in the current study

Table 5 Examples from the participants in character strengths, with their anonymous code number and age

Character strengths	Quotes
Creativity	I feel that I always think differently from others of my age. The way I look at things is different. I usually make some fresh and unique gadgets for the children at home (Participant 14, 45).
Curiosity	I'm interested in hearing gossip about what's going on between my neighbours and where my relatives have travelled, or finding out what grocery they recommend and where supermarkets are offering cheaper discounts. I'm interested in all these experiences and things, sort of curious (Participant 22, 53).
Judgment & Open-Mindedness	I think I'm older, but much wiser than when I was younger. I've been through a lot of things and I'm not so attached and concerned about everything. Nowadays, when things come up again, I think very rationally and calmly about what to do, unlike the young people who are so whiny (Participant 17, 47).
Love of Learning	I usually learn a new thing, that is, learn to dance the popular square dance to divert my attention. Recently I learnt to play new cellphone apps like Douyin and Kuaishou with my friends. I feel that I do not have time to be unhappy when learning new things (Participant 1, 48).
Perspective	My personality is very good, just love to study and love to work. I usually use two mobile phones to study, and all the recordings on the other mobile phone (Participant 11, 30).
Bravery	I think life is only a few decades, like a white horse passing a gap. Sooner or later, it is the same thing. The key is that you must think about it and look down on everything. This is the wisdom of survival (Participant 3, 54).
Perseverance	I think I dare to face these things myself. But my body is my own business, I must be brave (Participant 3, 54).
	My husband can feel that I am strong and persistent. Compared with others, the advantages my character brings is I can be a bit stronger against stress. (Participant 2,

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3		67).
4		I worked very hard in my work unit before, just want to get a promotion next year.
5		Unexpectedly, this illness disrupted the plan (Participant 4, 32).
6	Honesty	I am an ordinary person, I'm just straight hearted, and then I just say what I think, that
7		is, I am honest and sincere (Participant 1, 48).
8	Zest	Because I am passionate about making friends in the square dance group, now I am
9		sick and many partners come to see me. I was encouraged when they came (Participant
10		10, 52).
11	Capacity to	I am filial to my parents-in-law and be a good daughter-in-law. After being sick, I am
12	Love and be	very happy and feel beloved to be taken care of after a long time. I feel that my
13	Loved	families support me and love me (Participant 1, 48).
14	Kindness	Then I never did anything bad. Then I felt like I was very nice. I was just being kind to
15		others. Repay grievances with virtue and be compassionate (Participant 1, 48).
16		I believe benevolent must be rewarded with kindness. I've always been a good person
17		(Participant 3, 54).
18	Social	Every time my family came, I said I was fine and did not want them to worry
19	Intelligence	(Participant 9, 65).
20	Teamwork	Three cobblers with their wits combined, equal Zhuge Liang the master mind-
21		collective wisdom often proves superior (two heads are better than one) (Participant 4,
22		32).
23		I used to work, and I can have a good relationship with my colleagues and
24		subordinates (Participant 11, 30).
25	Fairness	Any conflicts between them can be handled fairly no matter what I say. I got this
26		disease and I cannot do anything now (Participant 11, 30).
27	Leadership	I was also a small head in the unit before, and how to allocate jobs to everyone
28		harmoniously is also a skill, and it can improve the efficiency of the entire department
29		(Participant 12, 35).
30		I have made it to the position of department manager in my organisation and would not
31		have missed work had I not been ill. I had to get my people's affairs in order before I
32		was admitted to hospital (Participant 24, 37).
33		I feel that I am selfless. I have sacrificed my whole life, sacrificed for my family, and
34		cooperated with national policies. I feel that our generation pays more attention to the
35		collective and puts everyone's interests ahead of their own. This is also written in the
36	Selflessness	Eight Honors and Eight Shames (Participant 13, 60).
37		It is proud to serve the collective people and ashamed to deviate from the people. We
38		are proud of unity and mutual assistance, and ashamed of self-interest (Participant 16,
39		56).
40	Forgiveness &	Well, I think everyone is good, but many patients are now demanding and dissatisfied
41	Mercy	with the people around them. Sometimes they lose their temper at the small mistakes
42		of doctors and nurses. It is better to be tolerant and forgive like me (Participant 11, 30).
43	Modesty &	My family and patients still thought I was humble. I feel that my personality is simple,
44	Humility	and I get along well with everyone (Participant 5, 52).
45	Prudence	I take photographs of the bags of medication that I receive infusions of and the
46		medication that I take every day. I also keep the bill for each payment. I often talk to
47		my doctor about my condition and I think that being discreet will give me peace of
48		mind (Participant 23, 38).
49	Self-	I felt that my self-discipline was meaningful, so I strengthened my exercise.
50	Regulation	(Participant 8, 55).
51	Pragmatism	Practice brings real wealth, it speaks louder than words (Participant 3, 54).
52		I am a pragmatic person, I don't know how to say nice things. I do not afraid and have
53		no time to feel depressed. I do not want to worry about it. I just want to eat and drink
54		and do my work. I do not want anything else (Participant 2, 67)
55	Appreciation	I was reading a novel about the philosophy of life recently. I will read this book after
56	of Beauty and	treatment. I feel comfortable appreciating these beautiful things. I also appreciate the
57	Excellence	natural environment and feel better (Participant 12, 35).
58	Gratitude	Everyone, whether old or young, should know how to be grateful (Participant 1, 48).
59		I think the nurses here have given me a lot of help, and the doctors respect my ideas
60		and help me with treatment. I am very grateful to them. The services in the hospital are

	very good, so I feel very good (Participant 3, 54).
	I feel that the doctors, nurses and family members are very concerned about me. Everyone has a very good attitude. It is not easy for everyone to work and live. I have a lot of spiritual support. I am very grateful (Participant 11, 30).
Hope	My family is pampering me now, which is pretty good. My husband said that I have been optimistic in the past years. Well, I just want to be stronger anyway, everything will definitely get better (Participant 2, 67).
Humor	But sometimes when I chat with patients in the department, no matter what I say, everyone is very happy. It feels like I am everyone's pistachio. But I think I am more cute than humorous (Participant 5, 52).
Religiousness & Spirituality	Just to get better soon, and live a few more years, I have been chanting and believing in Buddha. My child also said that I had changed but felt that my mentality was much better and calmer after relying on faith and religion (Participant 7, 65).

Theme 1: Cognitive strengths

Cognitive strengths reflect wisdom, knowledge, exploration, openness and knowledge-seeking [7]. This theme involves five strengths: creativity, curiosity, judgment and open-mindedness, love of learning, and perspective. These subthemes reflect the manifestations of cognitive strengths based on wisdom, openness and knowledge. In response to unexpected situations or unfamiliar problems, the participants usually gave wise solutions. Some participants aided their recovery by reading about treatment and nursing skills, which also demonstrated their love of learning. Love of learning refers to cognitive engagement, mastering new skills and increasing existing knowledge [35]. Creativity refers to original and adaptive thought or behaviour. The narratives of the participants also reflected how they found new ways to deal with the familial and social problems encountered while receiving treatment.

Theme 2: Emotional strengths

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4 When the participants talked about their lives after breast cancer and the
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6 inherent difficulties they faced, they also showed the emotional strengths of courage,
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8 perseverance, honesty and enthusiasm. This theme involves four strengths: bravery,
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10 perseverance, honesty and zest. These subthemes reflect the Chinese manifestations of
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12 emotional strengths. Being brave means not shrinking from challenges [36]. For
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14 example, some participants said that they dared to face physical damage after breast
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16 surgery and hair loss after chemotherapy. They felt that living was more important
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18 than these considerations. Bravery enabled self-determination and helped them
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20 actively persevere. Other participants said frankly that they told their family members
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22 about their fear of death, while emphasising that their family members remained
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24 encouraging and supportive.
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35 **Theme 3: Interpersonal strengths**

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37 Interpersonal strengths clearly reflect humanity and justice. They include love,
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39 kindness, social intelligence and developing relationships and caring for other people.
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41 This theme involves three strengths: capacity to love and be loved, kindness and
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43 social intelligence. Social intelligence is the awareness of the motives and feelings of
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45 oneself and others, and knowing how to adapt to different social situations [36]. This
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47 was demonstrated by many participants, especially patients who got along well with
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49 roommates and nurses during hospitalisation.
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58 **Theme 4: Civic and community strengths**

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4 Civic strengths are considered an integral part of a healthy community; they
5
6 include teamwork, fairness and leadership. In our study, we also identified a fourth
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8 civic strength: selflessness. Teamwork refers to social responsibility and working
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10 collaboratively as a member of a team or group. Fairness involves treating people the
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12 same according to principles of justice. Selflessness refers to dedication, rather than
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14 self-interest. This is a distinct cultural strength proposed by the Chinese participants
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16 in the study. Participants thought this was one of their strengths, which helped them
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18 obtain the respect of others and society.
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27 **Theme 5: Restraint and temperance strengths**

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30 Restraint and temperance strengths encompass forgiveness, modesty, prudence
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32 and self-regulation. In our study, this theme also contains a fifth strength: pragmatism.
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34 Modesty means an unwillingness to praise oneself and show off one's qualities or
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36 achievements [2,36]. In all of our interviews, when we first mentioned expressing
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38 personal strengths, the participants often avoided talking and reflected that humility is
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40 a common occurrence. The participants were reluctant to talk about their own
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42 achievements and character strengths. They thought that talking about this would
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44 violate their culture's respect for humility, and they were embarrassed. In contrast,
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46 they were more willing to admit that they had many shortcomings. Chinese Confucian
47
48 view has evolved into the view that humility makes people grow, while complacency
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50 and pride make people degenerate [37]. Pragmatism is related to facts or practical
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52 matters, and usually excludes intellectual or artistic matters. Pragmatism is a new
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4 emergent subtheme, which means practicality rather than idealism. This is another
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6 distinctly Chinese strength that may be related to China's long period of construction
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8 and development.
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11 12 13 14 **Theme 6: Transcendence strengths**

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17 Transcendence strengths provide meaning in life and exceed the limits of
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19 ordinary experience. This theme contains five strengths: appreciation of beauty and
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21 excellence, gratitude, hope, humour, and religiousness and spirituality. Although the
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23 participants mentioned that their spirituality was related to Buddhism, it was more
24
25 about how they gained strength from their belief system and cultural values. These
26
27 strengths gave the participants guidelines, made them feel special, and enabled them
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29 to cope with the negative things in their life and treatment. Gratitude and spirituality
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31 were common strengths across all of the interviews. The participants mentioned that
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33 they tended to gain comfort from these strengths after their diagnosis, despite their
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35 physical weakness and psychological dysfunction.
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45 **Positive outcomes and expectations of identifying and using character strengths**

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48 Several subjective positive outcomes were frequently addressed by the
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50 participants in connection with the awareness of strengths. They included improved
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52 self-awareness, personal confidence and self-esteem, increased happiness, optimism, a
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54 greater sense of meaning in life, improved well-being and decreased distress. Better
55
56 well-being and a sense of meaning were the most frequently addressed benefits
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(mentioned eleven times). In addition, in reference to these outcomes, most of the related strengths were those that involved reconnecting with people, such as gratitude, kindness, selflessness and love. The most frequently quoted proverb was ‘good people get rewards’ (mentioned eight times); that is, they felt that if they did good deeds for others, their health and life would improve.

Discussion

The patients with breast cancer in this study described a large repertoire of character strengths they used or wished for during survivorship. In line with previous studies [2], most of the themes and sub-themes coded in this study were in line with VIA. Two more strengths — selflessness and pragmatism — emerged. Cultural values and culture (e.g., collectivism, importance of family, Confucianism and Buddhism) helped structure the participants strengths and influenced their descriptions.

In our study, the participants with breast cancer did not differ from the healthy individuals studied in the previous literature in terms of transcendence strengths (appreciation of beauty and excellence, religiousness, spirituality) and cognitive strengths (wisdom and knowledge). These are potential characteristics of breast cancer patients that they can use when experiencing life and treatment events. These results are reflected in traditional palliative care or existing psychosocial programmes for breast cancer patients, in which patients are taught to express appropriate emotion and improve their problem-solving skills as part of the recovery process [38]. The

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4 breast cancer patients in this study experienced a similar appreciation of beauty. They
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6 appreciated excellence in all areas of life (art, nature and daily life) and in other
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8 people. They had coherent beliefs about truth and life independent of their disease and
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10 treatment.
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14 The experiences of emotional strengths, interpersonal strengths, civic and
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16 community strengths, restrained and temperance strengths, and other types of strength
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18 are significantly influenced by breast cancer and cultural values. Kindness and
19
20 gratitude are associated with positive affect [36], and were the character strengths
21
22 most frequently expressed by the participants. Studies have consistently shown that
23
24 strengths of the heart, such as kindness and gratitude, are more strongly associated
25
26 with well-being than individual strengths, such as creativity and leadership. The other
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28 character strengths most frequently mentioned by the participants were love,
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30 selflessness, honesty, modesty and hope. This coincides with the perception of
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32 character in Chinese culture. Chinese people have inherited the Confucian emphasis
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34 on the cultivation of good character traits, like benevolence and kindness [39].
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36 Kindness and fairness are the important characteristics in the traditional culture of
37
38 benevolence and righteousness. Some of the participants emphasised that their belief
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40 in Buddhism and religious practice made them feel much calmer during their breast
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42 cancer episode, and they felt that their spirit and beliefs gave them hope and gave life
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44 new meaning. This finding also suggests that spirituality/religiousness is related to
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46 meaning and goals in life [40].
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4 Concepts also need to be understood within the prevailing sociocultural and
5
6 political context [41]. The two newly emerging strengths are influenced by
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8 contemporary culture and policies. Selflessness refers to the characteristic Chinese
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10 concept that people should not be self-interested, be proud to serve the collective and
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12 ashamed to deviate from it, and strive for unity. Pragmatism emphasises beliefs that
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14 practice will lead to true knowledge and wealth; it has been strengthened by modern
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16 development policies.
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22 Throughout the research process, the participants had difficulty identifying
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24 and talking about their strengths. This may demonstrate their strength of modesty.
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26 Such humbleness could be influenced by Chinese Confucian culture [39]. Other
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28 studies have also identified this barrier to the expression of strengths [2]. The
29
30 challenges encountered by our participants in transforming their strengths into
31
32 descriptive language may reflect their need for more opportunities for self-awareness
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34 and self-reflection. Another possible explanation is the conceptual overlap between
35
36 strengths and cultural values. This overlap may lead people to underestimate their
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38 capabilities [42] and their interpersonal and cognitive strengths. The participants also
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40 highlighted that they wanted their character strengths to be more noticed, appreciated
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42 and encouraged by others, such as family members and medical caregivers. Chinese
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44 culture emphasises the role of the family. The affairs of family members are usually
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46 determined by the entire family [43]. In such a collectivist environment, individual
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48 character is often not valued. Interaction with physicians and nurses was also
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50 highlighted. The women's high respect for physicians and reliance on nurses led them
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4 to attach great importance to communication. The awareness and praise of personal
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6 character strengths by family members and medical caregivers enhanced their sense
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8 of self-esteem and well-being while living with breast cancer. One previous study
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10 similarly demonstrated that overcoming blindness to strengths could improve an
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12 individual's self-efficacy and self-confidence, which in turn could affect their well-
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14 being [44].
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22 **Theoretical considerations and implications**

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24 Although there are other current theories and frameworks based on strengths,
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26 they have a number of limitations; in contrast, VIA has achieved a wide range of
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28 applications. Roux, Dingley and Bush (2002) introduced the theory of inner strength
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30 and Lundman et al. (2010) offered a conceptual model of four core dimensions
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32 [45,46]. However, most related studies have been carried out on women. Expressions
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34 of inner strength at different ages and in different life circumstances take different
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36 forms [41]. Janssen, Van Regenmortel, and Abma (2011) identified sources of
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38 strength in three domains, individual, interactional and contextual, but did not define
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40 the strengths [47]. In a similar Chinese study, Duan and Ho (2017) used the VIA
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42 theory of character strengths, but their three-dimensional model of strengths
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44 (temperance, intellectual, and interpersonal) was generalised to the non-clinical
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46 community [48].
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56 Our findings among breast cancer patients support the theoretical
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58 understanding of strengths [7]. Our study examined the viability of the popular VIA
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4 theory among a specific population in the Chinese context. The findings also extend
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6 the theoretical and empirical evidence for the VIA model to the population of patients
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8 with breast cancer in China. This compatibility and integration of strengths theory and
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10 traditional values may make the VIA more than a conceptual tool. Although the
11
12 original VIA classification framework applied to a range of religions, philosophies
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14 and cultures, the situational themes of strengths could be expressed in different life
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16 domains or specific contexts/situations [48]. In our study, the patients with breast
17
18 cancer were in a special context with various challenges. It is important to note that
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20 the VIA is still being refined, so the list of strengths may change accordingly [49].
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22 Therefore, further research is needed to test the VIA among breast cancer patients
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24 with various characteristics.
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35 **Clinical implications**

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37 It is important to emphasise the psychological strengths of breast cancer
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39 patients and their abilities related to their personal traits in a kind of individual-
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41 oriented salutogenic approach [35]. Strengths that are associated with positive
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43 outcomes are those that link people together, such as gratitude, kindness, selflessness
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45 and love. However, for nurses, psychological counsellors and other professionals,
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47 further research is needed to optimise the description of strengths and evaluation for
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49 patients in China.
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56 To our knowledge, this is the first study to describe Chinese breast cancer
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58 patients' perceptions and experiences of character strengths. The findings indicate that
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4 character strength is a crucial psychological resource during patients' survivorship.
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7 Further research is needed to learn more about the strengths of a larger population of
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10 breast cancer patients with different backgrounds. In addition, strength identification
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12 and knowledge are only prerequisites. Using strengths is what leads to valuable
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14 outcomes. It is also necessary to explore strategies and interventions to help breast
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16 cancer patients mobilise their personal strengths. Strength-based practices adapted to
17
18 Chinese breast cancer patients should be developed in clinical programmes.
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24 **Study limitations**

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27 Although we have provided some important findings on the strengths of breast
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29 cancer patients, this study has several limitations. First, the generalisability of the
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31 results is limited. The number of participants was small. The study hospital was a
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33 provincial hospital that admitted patients from central China. Second, the findings
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35 were based on the statements of the participants. Additional studies are needed to
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37 explore the generalisability of our findings. Another limitation may be the definition
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39 of character strengths. This study used the core descriptive elements provided by
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41 Peterson and Seligman (2004) [12]. Making use of a broader study of strengths could
42
43 overcome this limitation, especially for those who are less familiar with character
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45 strengths and those who have difficulty in describing them. Replicating the study
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47 might increase its validity by allowing participants more time to become familiar with
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49 strengths and to speculate about expressions based on their individual experiences.
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Conclusion

This study revealed the obstacles encountered by breast cancer patients in describing their own strengths but proved that it is possible to uncover their character strengths. An evidence base is needed to optimise breast cancer patients' awareness of their strengths. Breast cancer patients' perceptions of character strengths are affected by various issues related to personal experience with breast cancer and cultural values. The participants in this study experienced better well-being and a greater sense of purpose in life due to character strengths that reconnected people. This study highlights the importance of cultural values to the construct of character strengths. Finally, this study established a theoretically sound model for understanding and addressing strengths in Chinese clinical breast cancer care with clear, culturally specific descriptions.

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6

7
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9

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11 the design, conduct, reporting or dissemination plans of this research.
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15 **Patient consent for publication** A digital code was used to refer to each participant
16 to maintain anonymity. Patient consent for publication Consent obtained directly from
17 patient(s).
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21 **Ethics approval** All procedures were in accordance with the guidelines of the
22 Research Ethics Committee of the University (CUHK Approval number: SBREC 19-
23 114) and Joint Chinese University of Hong Kong–New Territories East Cluster
24 Clinical Research Ethics Committee, reference number: 2019.429. This study was in
25 accordance with the ethical standards of the institutional research committee and with
26 the 1964 Helsinki declaration and its later amendments.
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36

37 **Data availability statement** Data are available on reasonable request.
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References

- 1 Moyle W, Parker D, Bramble M. *Care of older adults. A strengths-based approach*. Sydney: : Cambridge University Press 2014.
- 2 Waterworth S, Raphael D, Gott M, *et al*. Uncovering strengths within community dwelling older adults: What does it mean for health care practice? *Heal Soc Care Community* 2019;:1–9. doi:10.1111/hsc.12924
- 3 Gottlieb LN, Gottlieb B. Strengths-Based Nursing: A Process for Implementing a Philosophy Into Practice. *J Fam Nurs* 2017;**23**:319–40. doi:10.1177/1074840717717731
- 4 Duan W, Bu H. Development and initial validation of a short three-dimensional inventory of character strengths. *Qual Life Res* 2017;**26**:2519–31. doi:10.1007/s11136-017-1579-4
- 5 Jeste D V., Palmer BW, Boardman S, *et al*. Integrating Positive Psychiatry Into Clinical Practice. In: *Positive Psychiatry*. 2015. doi:10.1176/appi.books.9781615370818.dj12
- 6 McGrath RE, Hall-Simmonds A, Goldberg LR. Are Measures of Character and Personality Distinct? Evidence From Observed-Score and True-Score Analyses. *Assessment* 2020;**27**:117–35. doi:10.1177/1073191117738047
- 7 Peterson C, Seligman ME. *Character strengths and virtues A handbook and classification*. New York: : Oxford University Press 2004.
- 8 Pieters HC. ‘i’m Still Here’: Resilience among older survivors of breast cancer. *Cancer Nurs* 2016;**39**:E20–8. doi:10.1097/NCC.0000000000000248

- 1
2
3
4 9 Seligman M. Flourish: a visionary new understanding of happiness and well-
5
6 being. In: *Choice Reviews Online*. 2011. 48-7217-48-7217.
7
8
9 doi:10.5860/choice.48-7217
10
11 10 Shimai S, Otake K, Park N, *et al*. Convergence of character strengths in
12
13 American and Japanese young adults. *J Happiness Stud* 2006;**7**:311-22.
14
15
16 doi:10.1007/s10902-005-3647-7
17
18
19 11 Baumann D, Ruch W, Margelisch K, *et al*. Character Strengths and Life
20
21 Satisfaction in Later Life: an Analysis of Different Living Conditions. *Appl Res*
22
23 *Qual Life* Published Online First: 2019. doi:10.1007/s11482-018-9689-x
24
25
26
27 12 Chan CWH, Chang AM. Stress associated with tasks for family caregivers of
28
29 patients with cancer in Hong Kong. *J Adv Nurs* 1999;**29**:484-9.
30
31
32 doi:10.1097/00002820-199908000-00002
33
34
35 13 So WKW, Choi KC, Chen JMT, *et al*. Quality of life in head and neck cancer
36
37 survivors at 1 year after treatment: the mediating role of unmet supportive care
38
39 needs. *Support Care Cancer* 2014;**22**:2917-26. doi:10.1007/s00520-014-2278-
40
41
42 0
43
44
45 14 Rotegard AK, Fagermoen MS, Ruland CM. Cancer patients' experiences of
46
47 their personal strengths through illness and recovery. *Cancer Nurs* 2012;**35**:8-
48
49
50 17. doi:10.1097/NCC.0b013e3182116497
51
52
53 15 Niemiec R, Rashid T, Spinella M. Strong Mindfulness: Integrating Mindfulness
54
55 and Character Strengths. *J Ment Heal Couns* 2015;**34**:240-53.
56
57
58 doi:10.17744/mehc.34.3.34p6328x2v204v21
59
60

- 1
2
3
4 16 Fang SY, Lin YC, Chen TC, *et al.* Impact of marital coping on the relationship
5
6 between body image and sexuality among breast cancer survivors. *Support*
7
8
9 *Care Cancer* 2015;**23**:2551–9. doi:10.1007/s00520-015-2612-1
10
11
12 17 Wagner L, Ruch W. Good character at school: Positive classroom behavior
13
14 mediates the link between character strengths and school achievement. *Front*
15
16 *Psychol* 2015;**6**:1-13. doi:10.3389/fpsyg.2015.00610
17
18
19 18 Lim YJ. Relations between virtues and positive mental health in a Korean
20
21 population: A Multiple Indicators Multiple Causes (MIMIC) model approach.
22
23 *Int J Psychol* 2015;**50**:272–8. doi:10.1002/ijop.12096
24
25
26
27 19 McGrath RE. Character strengths in 75 nations: An update. *J Posit Psychol*
28
29 2015;**10**:41–52. doi:10.1080/17439760.2014.888580
30
31
32
33 20 Hanks RA, Rapport LJ, Waldron-Perrine B, *et al.* Role of character strengths in
34
35 outcome after mild complicated to severe traumatic brain injury: A positive
36
37 psychology study. *Arch Phys Med Rehabil* 2014;**95**:2096–102.
38
39
40
41
42
43
44 21 Macaskill A. Review of Positive Psychology Applications in Clinical Medical
45
46 Populations. *Healthcare* 2016;**4**:66. doi:10.3390/healthcare4030066
47
48
49 22 Yan T, Chan CWH, Chow KM, *et al.* A systematic review of the effects of
50
51 character strengths-based intervention on the psychological well-being of
52
53 patients suffering from chronic illnesses. *J Adv Nurs* 2020;**76**:1567–80.
54
55
56
57
58
59
60
doi:10.1111/jan.14356

- 1
2
3
4 23 Ruch W, Proyer RT. Mapping strengths into virtues: The relation of the 24
5
6 VIA-strengths to six ubiquitous virtues. *Front Psychol* 2015;**6**:1–12.
7
8
9 doi:10.3389/fpsyg.2015.00460
10
11
12 24 Markus HR, Kitayama S. Culture and the self: Implications for cognition,
13
14 emotion, and motivation. *Psychol Rev* 1991;**98**:224–53. doi:10.1037/0033-
15
16 295X.98.2.224
17
18
19 25 Chan CWH, Law BMH, So WKW, *et al.* Novel strategies on personalized
20
21 medicine for breast cancer treatment: An update. *Int J Mol Sci* 2017;**18**:2423.
22
23 doi:10.3390/ijms18112423
24
25
26
27 26 O’Brien BC, Harris IB, Beckman TJ, *et al.* Standards for reporting qualitative
28
29 research: A synthesis of recommendations. *Acad Med* 2014;**89**:1245–51.
30
31 doi:10.1097/ACM.0000000000000388
32
33
34
35 27 Lusardi P. Qualitative Research in Nursing: Advancing the Humanistic
36
37 Imperative. *Nurs Res* 1996;**45**:62. doi:10.1097/00006199-199601000-00014
38
39
40 28 Henderson PD, Gore S V., Davis BL, *et al.* African American women coping
41
42 with breast cancer: a qualitative analysis. *Oncol Nurs Forum* 2003;**30**:641–7.
43
44 doi:10.1188/03.ONF.641-647
45
46
47
48 29 Pitre NY, Myrick F. A view of nursing epistemology through reciprocal
49
50 interdependence: towards a reflexive way of knowing. *Nurs Philos* 2007;**8**:73–
51
52 84. doi:10.1111/j.1466-769X.2007.00298.x
53
54
55
56 30 Palinkas LA, Horwitz SM, Green CA, *et al.* Purposeful Sampling for
57
58 Qualitative Data Collection and Analysis in Mixed Method Implementation
59
60

- 1
2
3
4 Research. *Adm Policy Ment Heal Ment Heal Serv Res* 2015;**42**:533–44.
5
6 doi:10.1007/s10488-013-0528-y
7
8
9 31 Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In:
10
11 *Analyzing qualitative data*. 2010. 173–94.
12
13 doi:10.4324/9780203413081_chapter_9
14
15
16 32 Barasteh S, Rassouli M, Parandeh A, *et al*. Palliative care in the health system
17
18 of Iran: A review of the present status and the future challenges. *Asian Pacific*
19
20 *J Cancer Prev* 2020;**21**:845–51. doi:10.31557/APJCP.2020.21.3.845
21
22
23
24 33 Fox DE, Quinn RR, James MT, *et al*. Social Support in the Peritoneal Dialysis
25
26 Experience: A Qualitative Descriptive Study. *Can J Kidney Heal Dis* 2020;**7**.
27
28 doi:10.1177/2054358120946572
29
30
31
32 34 Sandelowski M. The problem of rigor in qualitative research. *ANS Adv Nurs*
33
34 *Sci* 1986;**8**:27–37. doi:10.1097/00012272-198604000-00005
35
36
37
38 35 Guse T, Hudson D. Psychological strengths and posttraumatic growth in the
39
40 successful reintegration of South African ex-offenders. *Int J Offender Ther*
41
42 *Comp Criminol* 2014;**58**:1449–65. doi:10.1177/0306624X13502299
43
44
45
46 36 Niemiec RM. *Character strengths interventions. A field guide for practitioners*.
47
48 Boston, MA: : Hogrefe Publishing 2018.
49
50
51 37 Li J. Humility in learning: A Confucian perspective. *J Moral Educ*
52
53 2016;**45**:147–65. doi:10.1080/03057240.2016.1168736
54
55
56 38 Spiegel D. Psychosocial aspects of breast cancer treatment. *Semin Oncol*
57
58 1997;**24**:S1-36-S1-47.
59
60

- 1
2
3
4 39 Guo Z. Chinese Confucian culture and the medical ethical tradition. *J Med*
5
6 *Ethics* 1995;**21**:239–46. doi:10.1136/jme.21.4.239
7
8
9 40 Moale AC, Rajasekhara S, Ueng W, *et al.* Educational intervention enhances
10
11 clinician awareness of Christian, Jewish, and Islamic teachings around end-of-
12
13 life care. *J Palliat Med* 2019;**22**:62–70. doi:10.1089/jpm.2018.0077
14
15
16 41 Lundman B, Aléx L, Jonsén E, *et al.* Inner strength-A theoretical analysis of
17
18 salutogenic concepts. *Int J Nurs Stud* 2010;**47**:251–60.
19
20 doi:10.1016/j.ijnurstu.2009.05.020
21
22
23 42 Tang X, Li Y, Duan W, *et al.* Character strengths lead to satisfactory
24
25 educational outcomes through strength use: A longitudinal analysis. *Front*
26
27 *Psychol* 2019;**10**:1-9. doi:10.3389/fpsyg.2019.01829
28
29
30 43 Ling M, Wang X, Ma Y, *et al.* A Review of the Current State of Hospice Care
31
32 in China. *Curr Oncol Rep* 2020;**22**:1–7. doi:10.1007/s11912-020-00959-y
33
34
35 44 Waters LE. Strength-based parenting and life satisfaction in teenagers. *Adv Soc*
36
37 *Sci Res J* 2015;**2**:158–173. doi:10.14738/assrj.211.1551
38
39
40 45 Roux G, Dingley C, Bush H. Inner Strength in Women: Metasynthesis of
41
42 Qualitative Findings in Theory Development. *J Theory Constr Test* 2002;**6**:86.
43
44
45 46 Janssen BM, Van Regenmortel T, Abma TA. Identifying sources of strength:
46
47 Resilience from the perspective of older people receiving long-term community
48
49 care. *Eur J Ageing* 2011;**8**:145–56. doi:10.1007/s10433-011-0190-8
50
51
52
53
54
55
56
57
58
59
60

- 1
2
3
4 47 Duan W, Ho SMY. Three-Dimensional Model of Strengths: Examination of
5
6 Invariance Across Gender, Age, Education Levels, and Marriage Status.
7
8
9 *Community Ment Health J* 2017;**53**:233–40. doi:10.1007/s10597-016-0038-y
10
11 48 Niemiec RM. Six Functions of Character Strengths for Thriving at Times of
12
13 Adversity and Opportunity: a Theoretical Perspective. *Appl Res Qual Life*
14
15 2020;**15**:551–72. doi:10.1007/s11482-018-9692-2
16
17
18
19 49 Park N, Peterson C, Seligman MEP. Strengths of character and well-being. *J*
20
21 *Soc Clin Psychol* 2004;**23**:603–19. doi:10.1521/jscp.23.5.603.50748
22
23
24
25
26
27
28
29
30
31
32
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Standards for Reporting Qualitative Research (SRQR)—checklist of items that should be included in reports of Qualitative studies

	Item No	Recommendation	Page No
Title and abstract			
Title	1	Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	1
Abstract	2	Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	2
Introduction			
Problem formulation	3	Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	4
Purpose or research question	4	Purpose of the study and specific objectives or questions	6
Methods			
Qualitative approach and research paradigm	5	Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/interpretivist) is also recommended; rationale ^b	7
Researcher characteristics and reflexivity	6	Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability	8
Context	7	Setting/site and salient contextual factors; rationale ^b	9
Sampling strategy	8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale ^b	7
Ethical issues pertaining to human subjects	9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	12
Data collection methods	10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale ^b	8
Data collection instruments and technologies	11	Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	9
Units of study	12	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	13
Data processing	13	Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/deidentification of excerpts	9

Data analysis	14	Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale ^b	10
Techniques to enhance trustworthiness	15	Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale ^b	12
(Table continues)			
Results /findings			
Synthesis and interpretation	16	Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	14-22
Links to empirical data	17	Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	16-18
Discussion			
Integration with prior work, implications, transferability, and contribution(s) to the field	18	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	22-25
Limitations	19	Trustworthiness and limitations of findings	27
Other			
Conflicts of interest	20	Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	29
Funding	21	Sources of funding and other support; role of funders in data collection, interpretation, and reporting	29

^aThe authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

^bThe rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Note: BC O'Brien, Harris, I. B. , Beckman, T. J. , Reed, D. A. , & Cook, D. A. . (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*, 89(9), 1245-1251.