

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

Tingting Yan ,¹ Carmen Wing Han Chan,² Ka Ming Chow,² Mingzi Li¹

To cite: Yan T, Chan CWH, Chow KM, *et al.* Experiences and perception of character strengths among patients with breast cancer in China: a qualitative study. *BMJ Open* 2022;**12**:e061994. doi:10.1136/bmjopen-2022-061994

► Prepublication history for this paper is available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2022-061994>).

Received 15 February 2022
Accepted 06 October 2022



© Author(s) (or their employer(s)) 2022. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹School of Nursing, Peking University, Beijing, Beijing, China

²The Nethersole School of Nursing, The Chinese University of Hong Kong, Hong Kong, Hong Kong

Correspondence to
Professor Mingzi Li;
limingzi2000@163.com

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 semistructured interviews based on the patients' lived experience after being diagnosed with breast cancer. Ethics approval was granted. Interviews were audiorecorded 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 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, humour, honesty and forgiveness. Cultural values (eg, 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.

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

Trial registration number NCT04219267, Pre-results.

INTRODUCTION

Strength-based approaches are receiving increasing international attention,¹ and are

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The qualitative design was used to explore the complex experiences, beliefs and behaviours on character strengths of patients with breast cancer.
- ⇒ Semistructured individual interviews provided time and scope for participants to give detailed information about their opinions regarding character strengths.
- ⇒ As qualitative methods prohibit generalisation, despite the data saturation achieved, there are results regarding transferability to other patients and different settings that should be interpreted with caution.

being applied to solve longitudinal clinical problems, such as promoting well-being and limiting ill-health.² Recognising and using individuals' strengths lead 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 patients with breast cancer 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 patients with cancer.¹² Standardised, problem-oriented care may diminish patients' chances of achieving the best possible recovery.¹³

Problem-oriented healthcare methods often overlook patients' strengths. The character strengths of patients with breast cancer have consequently received little attention.¹⁴ Moreover, the majority of studies on character strengths have been conducted in Western countries.^{14 15} 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 patients with breast cancer due to their social and cultural differences from Western patients.¹⁶

Theoretical framework

The most extensively researched model of character strengths is the Values in Action Classification of Strengths and Virtues (VIA classification).⁷ The VIA classification is a theory-driven framework comprising 24-character strengths conceptually organised as reflections of six virtues: wisdom, courage, humanity, justice, temperance and transcendence. Studies of different cultures have revealed character strengths in different populations, including adolescents,¹⁷ college students,¹⁸ adults⁶ and the elderly.² The classification model has been validated in 75 nations, with each sample including at least 150 respondents; these findings suggest substantial cross-cultural similarity in strengths.¹⁹ Virtues are classes of character strengths that show individual differences but relative cross-cultural stability.²⁰ The character strengths perspective has been recognised in the field of psychological counselling and rehabilitation as a way to understand psychosocial adaptation to chronic diseases, especially cancer.²¹ Because chronic diseases manifest themselves through a wide variety of symptoms and functional limitations,²² the specific meaning of character strengths are likely to vary across specific illnesses, cultural contexts and individuals. The six core virtue categories are universal, but these strengths are based on theoretical foundations.²³ Given that culture plays an important role in individuals' values, assumptions and needs,²⁴ the character strengths of patients with breast cancer may have different meanings and manifestations across different cultures. Moreover, researchers have highlighted the specific differences in the mental functioning of patients with various diseases and that of healthy individuals.²⁵ Therefore, a study of the character strengths of patients with breast cancer within the Chinese context is expected to further strengthen the theoretical VIA classification.

The evidence so far indicates that character strengths are a helpful personal resource.² However, there is a gap in the literature concerning how patients with breast cancer identify their own strengths and use them. The applicability of the VIA classification among Chinese patients with breast cancer is still unclear. Cultural values, such as collectivism, the importance of family, Confucianism

and Buddhism, could strongly determine how character strengths are expressed and the associated behaviour patterns. For example, Confucianism is a uniquely Chinese cultural concept that influences the definition of character strengths. This means that cultural factors play an important role in the theory of strengths. In this study, we explore the experiences and perception of character strengths among Chinese women with breast cancer.

METHODS

Study design and population

In this qualitative study, we use a descriptive and exploratory approach to uncover aspects of the experiences and perceptions of character strengths in Chinese women with breast cancer. Semistructured individual interviews were conducted. The Standards for Reporting Qualitative Research were followed.²⁶

The researchers used a maximum variation sampling method and purposive sampling technique to recruit participants to richly or densely describe the culture or phenomenon of interest.²⁷ Regarding the sample size, the recruitment of interviewees stopped when the data reached a saturation point, indicating that the phenomenon could be understood comprehensively without further recruitment. Data saturation was achieved through repetition and confirmation of the information obtained by participants, that is, no new insights emerged from the interview data of the last two included participants.²⁸

The inclusion criteria were as follows: the patients were (1) women with a confirmed diagnosis of breast cancer; (2) aged above 18 years old; (3) native Chinese; and (4) willing to participate in the study and offer informed consent. The exclusion criteria were as follows: the patient suffered from (1) one or more other life-threatening diseases, or (2) psychosis (eg, delusional disorder, schizophrenia).

Patient and public involvement

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

Data collection

We used semistructured interviews to foster interactivity and dialogue.²⁹ The instruments used in this study included a demographic data sheet and a semistructured interview guide. The demographic data sheet was devised to obtain information on the patient's age, marital status, educational level and types of breast cancer treatment. The interview guide was informed by the positive psychology model of character strengths and the previous literature. The interviews opened with a short introduction to the topic (eg, a definition and explanation of 'character strengths'). Each interview included 10 questions designed to encourage discussion on perceptions and beliefs about character strengths (box 1). Pilot interviews were conducted with three patients with breast

Box 1 Semistructured interview guide used in this study

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 helped you meet your expectations and/or needs?

cancer to check the appropriateness of the interview process and the accessibility of the questions. The demographic data sheet took approximately 5 min to complete, and the whole interview took approximately 30–60 min.

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.

Data analysis

Directed content analysis and framework analysis were used to analyse the data in a 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 thematic framework; (3) Stage 3, indexing: completing data structuring and pilot charting, refining and combining themes and subthemes; (4) Stage 4, charting: drawing summary chart and transferring data into the framework matrix and (5) Stage 5, data mapping and interpreting: comparing the analysis results to the original data and explaining the relationship between codes, subthemes and themes.³² The VIA classification was used as the guiding framework for direct content analysis. This framework is described in [table 1](#). The findings were presented in a synthesised form of themes (virtues) and subthemes (character strengths). No particular data software was used for coding or organisational purposes. We not only sought to establish a critical and common sense understanding of the text, but also to analyse it beyond personal experience. We also looked for embedded

character strengths in the content. The themes and subthemes were collected in a Microsoft Excel spreadsheet, with supporting descriptions and quotes. Demographic data were analysed using SPSS V.22.0 (SPSS, Chicago, Illinois) and descriptive statistics were obtained (frequencies, means, SD and percentages).

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 patients with breast cancer participated in the interviews. The average age of the participants was 52.54 years (range: 30–70 years). [Table 2](#) 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 (70.8%) participants had breast cancer in the left breast, five (20.8%) had cancer in the right breast and two (8.3%) had bilateral breast cancer.

Character strengths identified within the VIA framework

The participants' main character strengths were consistent with the VIA classification; they included cognitive strengths, emotional strengths, civic and community strengths, interpersonal strengths, temperance strengths and transcendence strengths. [Table 3](#) summarises the character strengths of the patients with breast cancer. The original 24 strengths were identified in the findings, and two new strengths of selflessness and pragmatism emerged in our study. The themes (virtues) and subthemes (strengths) are illustrated by sample quotes from the participants ([table 4](#)). The participants also gave their perceptions and comments on the outcomes and expectations of identifying and using individual character strengths. In general, the participants expressed improved self-awareness and a greater sense of purpose and well-being.

Table 1 The Values in Action Classification of virtues and character strengths

Virtues	Character strengths	Multiple descriptions, pronouns and manifestations
1. Wisdom and knowledge Cognitive strengths related to attaining and using new knowledge	Creativity Curiosity Judgement and open-mindedness Love of learning Perspective	(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) (relishing in the acquisition of new skills and knowledge, mastering new skills, topics, and bodies of knowledge) (wisdom, providing wise counsel to others)
2. Courage Emotional strengths that involve working hard to accomplish goals in the face of opposition	Bravery Perseverance Honesty Zest	(valour, not withdrawing or shrinking from threat, challenge, difficulty, or pain) (persistence, finishing what one starts, industriousness, working hard to finish what is started) (authenticity, integrity, speaking the truth and presenting oneself in a genuine and authentic way) (vitality, enthusiasm, vigour, energy, approaching life with excitement and energy)
3. Humanity Interpersonal strengths that involve developing relationships and caring for other people	Capacity to love and be loved Kindness Social Intelligence	(valuing close relations with others) (generosity, doing favours, nurturance, care, compassion, altruistic love, being generous and doing good deeds) (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 Civic strengths related to be an integral part of a healthy community	Teamwork Fairness Leadership	(citizenship, social responsibility, loyalty, working collaboratively and well as member of a team or a group) (treating all people the same according to notions of fairness and justice and with impartiality) (effectively managing groups to complete activities, organising group activities and seeing that they happen)
5. Temperance Strengths related to the use of restraint in thoughts, emotions and behaviour	Forgiveness and mercy Modesty and humility Prudence Self-regulation	(forgiving those who have done wrong) (being modest and letting one's accomplishments speak for themselves) (being cautious about one's actions or choices; not saying or doing things that might later be regretted) (regulating what one feels and does, self-control, exercising self-control and discipline)
6. Transcendence Strengths that provide meaning in life and exceed the limits of ordinary experience	Appreciation of beauty and Excellence Gratitude Hope Humour Religiousness and spirituality	(awe, wonder, elevation, noticing and admiring beauty and excellence and/or skilled performance in all domains of everyday life) (being aware of and thankful for the good things that happen) (optimism, future-mindedness, future orientation, expecting the best in the future and working actively to achieve it) (playfulness, enjoying laughter and amusing others, liking to laugh and joke, bringing smiles to other people) (faith, purpose, having beliefs about life that bring comfort, having coherent beliefs about the higher purpose and meaning of life)

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

Theme 1: cognitive strengths

Cognitive strengths reflect wisdom, knowledge, exploration, openness and knowledge-seeking.⁷ This theme involves five strengths: creativity, curiosity, judgement 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

Table 2 Demographic information and clinical data of the participants (n=24)

Characteristics	Number	(%)
Age (years)		
Mean±SD	52.54±11.56	
Range	30–70	
Age <60	15	62.5
Age ≥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
Stage of disease		
I/II	16	66.7
III/IV	8	33.3
Time since diagnosis (months)		
Mean	8.63	
Adjuvant therapy		
Only had surgery	10	41.7
Also had chemotherapy or radiation therapy	14	58.3

Because of rounding, percentages may not total 100.

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

When the participants talked about their lives after breast cancer and the inherent difficulties they faced, they also showed the emotional strengths of courage, perseverance, honesty and enthusiasm. This theme involves four strengths: bravery, perseverance, honesty and zest. These subthemes reflect the Chinese manifestations of

emotional strengths. Being brave means not shrinking from challenges.³⁶ For example, some participants said that they dared to face physical damage after breast surgery and hair loss after chemotherapy. They felt that living was more important than these considerations. Bravery enabled self-determination and helped them actively persevere. Other participants said frankly that they told their family members about their fear of death, while emphasising that their family members remained encouraging and supportive.

Theme 3: interpersonal strengths

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

Theme 4: civic and community strengths

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

Theme 5: restraint and temperance strengths

Restraint and temperance strengths encompass forgiveness, modesty, prudence and self-regulation. In our study, this theme also contains a fifth strength: pragmatism. Modesty means an unwillingness to praise oneself and show off one's qualities or achievements.^{2 36} In all of our interviews, when we first mentioned expressing personal strengths, the participants often avoided talking and reflected that humility is a common occurrence. The participants were reluctant to talk about their own achievements and character strengths. They thought that talking about this would violate their culture's respect for humility, and they were embarrassed. In contrast, they were more willing to admit that they had many shortcomings. Chinese Confucian view has evolved into the view that humility makes people grow, while complacency and pride make people degenerate.³⁷ Pragmatism is related to facts or practical matters, and usually excludes intellectual or artistic matters. Pragmatism is a new emergent subtheme, which means practicality rather than idealism. This is another distinctly Chinese strength that may

Table 3 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
	Judgement and open-mindedness	The ability to think, understand, analyse, 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, whole-heartedly; 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
Civic and community strengths	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
	Selflessness*	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 and mercy	Forgive, ignore the faults of others; tolerant, considerate; not to care about wrongdoing or to hold accountable; compassion
	Modesty and 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*	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 favours 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
	Humour	Funny, humorous, playfulness and enjoy talking witty, bring laughter and amusement to others
	Religiousness and 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

*Newly emerged themes in the current study.

be related to China's long period of construction and development.

Theme 6: Transcendence strengths

Transcendence strengths provide meaning in life and exceed the limits of ordinary experience. This theme contains five strengths: appreciation of beauty and excellence, gratitude, hope, humour and religiousness and spirituality. Although the participants mentioned that their spirituality was related to Buddhism, it was more about how they gained strength from their belief system and cultural values. These strengths gave the participants guidelines, made them feel special and enabled them

to cope with the negative things in their life and treatment. Gratitude and spirituality were common strengths across all of the interviews. The participants mentioned that they tended to gain comfort from these strengths after their diagnosis, despite their physical weakness and psychological dysfunction.

Positive outcomes and expectations of identifying and using character strengths

Several subjective positive outcomes were frequently addressed by the participants in connection with the awareness of strengths. They included improved self-awareness, personal confidence and self-esteem, increased

Table 4 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).
Judgement and 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). 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).
Perspective	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).
Bravery	I think I dare to face these things myself. But my body is my own business, I must be brave (Participant 3, 54).
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). I worked very hard in my work unit before, just want to get a promotion next year. Unexpectedly, this illness disrupted the plan (Participant 4, 32).
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).
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).
Capacity to love and be loved	I am filial to my parents-in-law and be a good daughter-in-law. After being sick, I am very happy and feel beloved to be taken care of after a long time. I feel that my families support me and love me (Participant 1, 48).
Kindness	Then I never did anything bad. Then I felt like I was very nice. I was just being kind to others. Repay grievances with virtue and be compassionate (Participant 1, 48). I believe benevolent must be rewarded with kindness. I've always been a good person (Participant 3, 54).
Social intelligence	Every time my family came, I said I was fine and did not want them to worry (Participant 9, 65).
Teamwork	Three cobblers with their wits combined, equal Zhuge Liang the master mind-collective wisdom often proves superior (two heads are better than one) (Participant 4, 32). I used to work, and I can have a good relationship with my colleagues and subordinates (Participant 11, 30).
Fairness	Any conflicts between them can be handled fairly no matter what I say. I got this disease and I cannot do anything now (Participant 11, 30).
Leadership	I was also a small head in the unit before, and how to allocate jobs to everyone harmoniously is also a skill, and it can improve the efficiency of the entire department (Participant 12, 35). I have made it to the position of department manager in my organisation and would not have missed work had I not been ill. I had to get my people's affairs in order before I was admitted to hospital (Participant 24, 37).
Selflessness	I feel that I am selfless. I have sacrificed my whole life, sacrificed for my family, and cooperated with national policies. I feel that our generation pays more attention to the collective and puts everyone's interests ahead of their own. This is also written in the Eight Honors and Eight Shames (Participant 13, 60). It is proud to serve the collective people and ashamed to deviate from the people. We are proud of unity and mutual assistance, and ashamed of self-interest (Participant 16, 56).
Forgiveness and mercy	Well, I think everyone is good, but many patients are now demanding and dissatisfied with the people around them. Sometimes they lose their temper at the small mistakes of doctors and nurses. It is better to be tolerant and forgive like me (Participant 11, 30).
Modesty and humility	My family and patients still thought I was humble. I feel that my personality is simple, and I get along well with everyone (Participant 5, 52).
Prudence	I take photographs of the bags of medication that I receive infusions of and the medication that I take every day. I also keep the bill for each payment. I often talk to my doctor about my condition and I think that being discreet will give me peace of mind (Participant 23, 38).
Self-regulation	I felt that my self-discipline was meaningful, so I strengthened my exercise (Participant 8, 55).
Pragmatism	Practice brings real wealth, it speaks louder than words (Participant 3, 54). I am a pragmatic person, I don't know how to say nice things. I do not afraid and have no time to feel depressed. I do not want to worry about it. I just want to eat and drink and do my work. I do not want anything else (Participant 2, 67).
Appreciation of beauty and excellence	I was reading a novel about the philosophy of life recently. I will read this book after treatment. I feel comfortable appreciating these beautiful things. I also appreciate the natural environment and feel better (Participant 12, 35).

Continued

Table 4 Continued

Character strengths	Quotes
Gratitude	Everyone, whether old or young, should know how to be grateful (Participant 1, 48). I think the nurses here have given me a lot of help, and the doctors respect my ideas 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).
Humour	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 and 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).

happiness, optimism, a greater sense of meaning in life, improved well-being and decreased distress. Better well-being and a sense of meaning were the most frequently addressed benefits (mentioned 11 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 subthemes coded in this study were in line with VIA. Two more strengths—selflessness and pragmatism—emerged. Cultural values and culture (eg, 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 patients with breast cancer that they can use when experiencing life and treatment events. These results are reflected in traditional palliative care or existing psychosocial programmes for patients with breast cancer, in which patients are taught to express appropriate emotion and improve their problem-solving skills as part of the recovery process.³⁸ The patients with breast cancer in this study experienced a similar appreciation of beauty. They appreciated excellence in all areas of life (art, nature and daily life) and in other people. They had coherent beliefs about truth and life independent of their disease and treatment.

The experiences of emotional strengths, interpersonal strengths, civic and community strengths, restrained and

temperance strengths and other types of strength are significantly influenced by breast cancer and cultural values. Kindness and gratitude are associated with positive affect,³⁶ and were the character strengths most frequently expressed by the participants. Studies have consistently shown that strengths of the heart, such as kindness and gratitude, are more strongly associated with well-being than individual strengths, such as creativity and leadership. The other character strengths most frequently mentioned by the participants were love, selflessness, honesty, modesty and hope. This coincides with the perception of character in Chinese culture. Chinese people have inherited the Confucian emphasis on the cultivation of good character traits, like benevolence and kindness.³⁹ Kindness and fairness are the important characteristics in the traditional culture of benevolence and righteousness. Some of the participants emphasised that their belief in Buddhism and religious practice made them feel much calmer during their breast cancer episode, and they felt that their spirit and beliefs gave them hope and gave life new meaning. This finding also suggests that spirituality/religiousness is related to meaning and goals in life.⁴⁰

Concepts also need to be understood within the prevailing sociocultural and political context.⁴¹ The two newly emerging strengths are influenced by contemporary culture and policies. Selflessness refers to the characteristic Chinese concept that people should not be self-interested, be proud to serve the collective and ashamed to deviate from it and strive for unity. Pragmatism emphasises beliefs that practice will lead to true knowledge and wealth; it has been strengthened by modern development policies.

Throughout the research process, the participants had difficulty identifying and talking about their strengths. This may demonstrate their strength of modesty. Such humbleness could be influenced by Chinese Confucian culture.³⁹ Other studies have also identified this barrier to the expression of strengths.² The challenges encountered by our participants in transforming their strengths into descriptive language may reflect their need for

more opportunities for self-awareness and self-reflection. Another possible explanation is the conceptual overlap between strengths and cultural values. This overlap may lead people to underestimate their capabilities⁴² and their interpersonal and cognitive strengths. The participants also highlighted that they wanted their character strengths to be more noticed, appreciated and encouraged by others, such as family members and medical caregivers. Chinese culture emphasises the role of the family. The affairs of family members are usually determined by the entire family.⁴³ In such a collectivist environment, individual character is often not valued. Interaction with physicians and nurses was also highlighted. The women's high respect for physicians and reliance on nurses led them to attach great importance to communication. The awareness and praise of personal character strengths by family members and medical caregivers enhanced their sense of self-esteem and well-being while living with breast cancer. One previous study similarly demonstrated that overcoming blindness to strengths could improve an individual's self-efficacy and self-confidence, which in turn could affect their well-being.⁴⁴

Theoretical considerations and implications

Although there are other current theories and frameworks based on strengths, they have a number of limitations; in contrast, VIA has achieved a wide range of applications. Roux *et al*⁴⁵ introduced the theory of inner strength and Lundman *et al*⁴¹ offered a conceptual model of four core dimensions.^{45 46} However, most related studies have been carried out on women. Expressions of inner strength at different ages and in different life circumstances take different forms.⁴¹ Janssen *et al*⁴⁶ identified sources of strength in three domains, individual, interactional and contextual, but did not define the strengths.⁴⁷ In a similar Chinese study, Duan and Bu⁴ used the VIA theory of character strengths, but their three-dimensional model of strengths (temperance, intellectual and interpersonal) was generalised to the non-clinical community.⁴⁸

Our findings among patients with breast cancer support the theoretical understanding of strengths.⁷ Our study examined the viability of the popular VIA theory among a specific population in the Chinese context. The findings also extend the theoretical and empirical evidence for the VIA model to the population of patients with breast cancer in China. This compatibility and integration of strengths theory and traditional values may make the VIA more than a conceptual tool. Although the original VIA classification framework applied to a range of religions, philosophies and cultures, the situational themes of strengths could be expressed in different life domains or specific contexts/situations.⁴⁸ In our study, the patients with breast cancer were in a special context with various challenges. It is important to note that the VIA is still being refined, so the list of strengths may change accordingly.⁴⁹ Therefore, further research is needed to test the VIA among patients with breast cancer with various characteristics.

Clinical implications

It is important to emphasise the psychological strengths of patients with breast cancer and their abilities related to their personal traits in a kind of individual-oriented salutogenic approach.³⁵ Strengths that are associated with positive outcomes are those that link people together, such as gratitude, kindness, selflessness and love. However, for nurses, psychological counsellors and other professionals, further research is needed to optimise the description of strengths and evaluation for patients in China.

To our knowledge, this is the first study to describe perceptions and experiences of character strengths of Chinese patients with breast cancer. The findings indicate that character strength is a crucial psychological resource during patients' survivorship. Further research is needed to learn more about the strengths of a larger population of patients with breast cancer 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 patients with breast cancer mobilise their personal strengths. Strength-based practices adapted to Chinese patients with breast cancer should be developed in clinical programmes.

Study limitations

Although we have provided some important findings on the strengths of patients with breast cancer, 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 Seligman⁷. 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

This study revealed the obstacles encountered by patients with breast cancer in describing their own strengths but proved that it is possible to uncover their character strengths. An evidence base is needed to optimise awareness of their strengths in patients with breast cancer. Perceptions of character strengths of patients with breast cancer 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.

Acknowledgements The authors are grateful to all the participants who generously gave their time to take part in an interview for this study and shared their experiences.

Contributors TY contributed to the conception and design, data collection by conducting the interviews, analysis and interpretation, drafted and reviewed the manuscript. CWHC contributed to the conception and design, interpretation and reviewed the manuscript. KMC and ML contributed to the conception and design and reviewed the manuscript. All authors have given final approval of the version to be published and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. TY is responsible for the overall content as guarantor.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

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

Patient consent for publication Consent obtained directly from patient(s).

Ethics approval This study was approved by Ethics name ID: THE CHINESE UNIVERSITY OF HONG KONG Survey and Behavioural Research Ethics, reference number: SBREC 19-114 and Joint Chinese University of Hong Kong–New Territories East Cluster Clinical Research Ethics Committee, reference number: 2019.429. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Tingting Yan <http://orcid.org/0000-0002-2368-9248>

REFERENCES

- Moyle W, Parker D, Bramble M. *Care of older adults. A strengths-based approach*. Sydney: Cambridge University Press, 2014.
- Waterworth S, Raphael D, Gott M, et al. Uncovering strengths within community dwelling older adults: what does it mean for health care practice? *Health Soc Care Community* 2020;28:1–9.
- Gottlieb LN, Gottlieb B. Strengths-based nursing: a process for implementing a philosophy into practice. *J Fam Nurs* 2017;23:319–40.
- Duan W, Bu H. Development and initial validation of a short three-dimensional inventory of character strengths. *Qual Life Res* 2017;26:2519–31.
- Jeste D V, Palmer BW, Boardman S. Integrating Positive Psychiatry Into Clinical Practice. In: *Positive psychiatry*, 2015.
- 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.
- Peterson C, Seligman ME. *Character strengths and virtues a Handbook and classification*. New York: Oxford University Press, 2004.
- Pieters HC. "I'm still here": resilience among older survivors of breast cancer. *Cancer Nurs* 2016;39:E20–8.
- Seligman M. *Flourish: a visionary new understanding of happiness and well-being*. Choice Reviews, 2011: 48–7217.
- Shimai S, Otake K, Park N, et al. Convergence of character strengths in American and Japanese young adults. *J Happiness Stud* 2006;7:311–22.
- Baumann D, Ruch W, Margelisch K. Character strengths and life satisfaction in later life: an analysis of different living conditions. *Appl Res Qual Life* 2019.
- Chan CWH, Chang AM. Stress associated with tasks for family caregivers of patients with cancer in Hong Kong. *J Adv Nurs* 1999;29:484–9.
- So WKW, Choi KC, Chen JMT, et al. Quality of life in head and neck cancer survivors at 1 year after treatment: the mediating role of unmet supportive care needs. *Support Care Cancer* 2014;22:2917–26.
- Rotegård AK, Fagermoen MS, Ruland CM. Cancer patients' experiences of their personal strengths through illness and recovery. *Cancer Nurs* 2012;35:E8–17.
- Niemiec R, Rashid T, Spinella M. Strong mindfulness: integrating mindfulness and character strengths. *J Ment Health Couns* 2012;34:240–53.
- Fang S-Y, Lin Y-C, Chen T-C, et al. Impact of marital coping on the relationship between body image and sexuality among breast cancer survivors. *Support Care Cancer* 2015;23:2551–9.
- Wagner L, Ruch W. Good character at school: positive classroom behavior mediates the link between character strengths and school achievement. *Front Psychol* 2015;6:1–13.
- Lim Y-J. Relations between virtues and positive mental health in a Korean population: a multiple indicators multiple causes (mimic) model approach. *Int J Psychol* 2015;50:272–8.
- McGrath RE. Character strengths in 75 nations: an update. *J Posit Psychol* 2015;10:41–52.
- Hanks RA, Rapport LJ, Waldron-Perrine B, et al. Role of character strengths in outcome after mild complicated to severe traumatic brain injury: a positive psychology study. *Arch Phys Med Rehabil* 2014;95:2096–102.
- Macaskill A. Review of positive psychology applications in clinical medical populations. *Healthcare* 2016;4:66.
- Yan T, Chan CWH, Chow KM, et al. A systematic review of the effects of character strengths-based intervention on the psychological well-being of patients suffering from chronic illnesses. *J Adv Nurs* 2020;76:1567–80.
- Ruch W, Proyer RT. Mapping strengths into virtues: the relation of the 24 VIA-strengths to six ubiquitous virtues. *Front Psychol* 2015;6:1–12.
- Markus HR, Kitayama S. Culture and the self: implications for cognition, emotion, and motivation. *Psychol Rev* 1991;98:224–53.
- Chan CWH, Law BMH, So WKW, et al. Novel strategies on personalized medicine for breast cancer treatment: an update. *Int J Mol Sci* 2017;18:2423.
- O'Brien BC, Harris IB, Beckman TJ, et al. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med* 2014;89:1245–51.
- Lusardi P. Qualitative research in nursing: advancing the humanistic imperative. *Nurs Res* 1996;45:62.
- Henderson PD, Gore SV, Davis BL, et al. African American women coping with breast cancer: a qualitative analysis. *Oncol Nurs Forum* 2003;30:641–7.
- Pitre NY, Myrick F. A view of nursing epistemology through reciprocal interdependence: towards a reflexive way of knowing. *Nurs Philos* 2007;8:73–84.
- Palinkas LA, Horwitz SM, Green CA, et al. Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Adm Policy Ment Health* 2015;42:533–44.
- Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In: *Analyzing qualitative data*, 2010: 173–94.
- Barasteh S, Rassouli M, Parandeh A, et al. Palliative care in the health system of Iran: a review of the present status and the future challenges. *Asian Pac J Cancer Prev* 2020;21:845–51.
- Fox DE, Quinn RR, James MT, et al. Social support in the peritoneal dialysis experience: a qualitative descriptive study. *Can J Kidney Health Dis* 2020;7:2054358120946572.
- Sandelowski M. The problem of rigor in qualitative research. *ANS Adv Nurs Sci* 1986;8:27–37.
- Guse T, Hudson D. Psychological strengths and posttraumatic growth in the successful reintegration of South African ex-offenders. *Int J Offender Ther Comp Criminol* 2014;58:1449–65.
- Niemiec RM. *Character strengths interventions. A field guide for practitioners*. Boston, MA: Hogrefe Publishing, 2018.
- Li J. Humility in learning: a confucian perspective. *J Moral Educ* 2016;45:147–65.
- Spiegel D. Psychosocial aspects of breast cancer treatment. *Semin Oncol* 1997;24:S1-36–S1-47.
- Guo Z. Chinese confucian culture and the medical ethical tradition. *J Med Ethics* 1995;21:239–46.

- 40 Moale AC, Rajasekhara S, Ueng W, *et al*. Educational intervention enhances clinician awareness of Christian, Jewish, and Islamic teachings around end-of-life care. *J Palliat Med* 2019;22:62–70.
- 41 Lundman B, Aléx L, Jonsén E, *et al*. Inner strength--a theoretical analysis of salutogenic concepts. *Int J Nurs Stud* 2010;47:251–60.
- 42 Tang X, Li Y, Duan W, *et al*. Character strengths lead to satisfactory educational outcomes through strength use: a longitudinal analysis. *Front Psychol* 2019;10:1–9.
- 43 Ling M, Wang X, Ma Y, *et al*. A review of the current state of hospice care in China. *Curr Oncol Rep* 2020;22:1–7.
- 44 Waters LE. Strength-based parenting and life satisfaction in teenagers. *Adv Soc Sci Res J* 2015;2:158–73.
- 45 Roux G, Dingley C, Bush H. Inner strength in women: metasynthesis of qualitative findings in theory development. *J Theory Constr Test* 2002;6:86.
- 46 Janssen BM, Van Regenmortel T, Abma TA. Identifying sources of strength: resilience from the perspective of older people receiving long-term community care. *Eur J Ageing* 2011;8:145–56.
- 47 Duan W, Ho SMY. Three-dimensional model of Strengths: examination of invariance across gender, age, education levels, and marriage status. *Community Ment Health J* 2017;53:233–40.
- 48 Niemiec RM. Six functions of character strengths for thriving at times of adversity and opportunity: a theoretical perspective. *Appl Res Qual Life* 2020;15:551–72.
- 49 Park N, Peterson C, Seligman MEP. Strengths of character and well-being. *J Soc Clin Psychol* 2004;23:603–19.