Experiences and perception of character strengths among patients 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 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 collect 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, honesty, and forgiveness. Cultural values (eg, collectivism, familyism, 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 personal character strengths.

Trial registration number NCT04219267, Pre-results.

INTRODUCTION

Strength-based approaches are receiving increasing international attention, and are being applied to solve longitudinal clinical problems, such as promoting well-being and limiting ill-health. Recognising and using individuals’ strengths lead to positive outcomes, such as coping, recovery and greater meaning in life. Instead of focusing on problems, researchers have proposed that character strengths should be incorporated into clinical practice to help clients enhance well-being. Character is the positive and socially valued elements of personality, which have a moral component. 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. In one practical case, strength-based approaches were adopted by clinicians to help patients with breast cancer deal with the continuing challenges of survivorship.

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. Previous studies have demonstrated that character strengths are positively associated with quality of life, well-being, happiness and general health. Evidence is increasing that people who use their strengths on a regular basis have higher

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.

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levels of well-being. However, medical staff and caregivers tend to underestimate the personal strengths of patients with cancer. Standardised, problem-oriented care may diminish patients’ chances of achieving the best possible recovery.

Problem-oriented healthcare methods often overlook patients’ strengths. The character strengths of patients with breast cancer have consequently received little attention. Moreover, the majority of studies on character strengths have been conducted in Western countries. 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.

Theoretical framework
The most extensively researched model of character strengths is the Values in Action Classification of Strengths and Virtues (VIA classification). 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, college students, adults and the elderly. 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. Virtues are classes of character strengths that show individual differences but relative cross-cultural stability. 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. Because chronic diseases manifest themselves through a wide variety of symptoms and functional limitations, 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. Given that culture plays an important role in individuals’ values, assumptions and needs, 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. 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. 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. 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. 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.

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. 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 cancer.
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. Open dialogue and careful probing were used during the interviews to ensure that the information was reliable. To enhance transferability, 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.

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**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?
Theme 1: cognitive strengths

Cognitive strengths reflect wisdom, knowledge, exploration, openness and knowledge-seeking. 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. 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**

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. 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. 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. 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

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**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.
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. 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). |
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, 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 (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 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. 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, 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. 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.

Concepts also need to be understood within the prevailing sociocultural and political context. 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. Other studies have also identified this barrier to the expression of strengths. The challenges encountered by our participants in transforming their strengths into descriptive language may reflect their need for

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**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). |
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 capabilities 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 emphasizes the role of the family. The affairs of family members are usually determined by the entire family. In such a collectivist environment, 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.

**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. introduced the theory of inner strength and Lundman et al. offered a conceptual model of four core dimensions. 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. Janssen et al. identified sources of strength in three domains, individual, interactional and contextual, but did not define the strengths. In a similar Chinese study, Duan and Bu used the VIA theory of character strengths, but their three-dimensional model of strengths (temperance, intellectual and interpersonal) was generalized to the non-clinical community.

Our findings among patients with breast cancer support the theoretical understanding of strengths. 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. 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. Therefore, further research is needed to test the VIA among patients with breast cancer with various characteristics.

**Clinical implications**

It is important to emphasize the psychological strengths of patients with breast cancer and their abilities related to their personal traits in a kind of individual-oriented salutogenic approach. 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 optimize 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 mobilize 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 Seligman. 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 optimize 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.

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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 participant(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.

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