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# A Qualitative Study Exploring Coping Strategies in Chinese Families During Children's Hospitalization for Cancer Treatment

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ABSTRACT

*Purpose:* To explore how Chinese families cope with children's hospitalization for cancer treatment.
*Design and methods:* A descriptive qualitative inquiry was employed. Semi-structured interview was conducted in four pediatric oncology departments in four hospitals from November 2017 to June 2018. The interviews focused on how families cope with the challenges resulting from their children's hospitalization for cancer treatment. Twenty one parents participated into the study.
*Results:* Four categories related to family coping strategies emerged from the data, including increasing family strength, maintaining optimistic thoughts, seeking external support, and not disclosing the unfavorable information.
*Conclusions:* Families had adopted multiple coping strategies to handle the challenges caused by children's hospitalization for cancer treatment. The influences of Chinese culture on family coping should be taken into consideration during family-centered interventions development. Further studies could analyze whether the spouse perspectives are independent from one another and whether the coping strategies change as the time of hospitalization.
*Practice implications:* This study has reminded nurses' to become more concerned about the influences of culture on families' coping strategies during this challenging period. Other nurses in the world could understand how to enhance family coping strategies of Chinese clients.



## Introduction

Advanced therapy for childhood cancer is often associated with two to three years of repeated and prolonged hospitalization. This process is an immensely stressful experience for the entire family (Long & Marsland, 2011; Wiener et al., 2017) of a child with cancer, and may lead to a family crisis or threaten its integrity. Certain families adapt well to this situation, whereas others continue to experience extremely serious problems (e.g., divorce, disruption of family routine). Family adaptation can be assessed exploring family coping according to the Double ABC-X Model (Kong, 2010).

Family coping is a bridging concept comprising cognitive and behavioral components, in which family resources, perceptions, and behavioral responses cooperate to contribute to a rebalanced family functioning (Kong, 2010). The adaptation of a family to a stressful event depends largely on how it copes with the event (McCubbin, 1996). Effective family coping strategies are more likely to lead to bon-adaptation (positive adaptation), whereas, families not applying such strategies may experience maladaptation (negative adaptation). Previous studies have found that family coping plays an important role in adaptation to a stressful event (e.g., chronic disease, disability, etc.) (Lin, Orsmond, Coster, & Cohn, 2011; Pakenham, Samios, & Sofronoff, 2005; Wartella, Auerbach, & Ward, 2009).

Cultural norms affect the choice of coping strategies and are individually utilized in any given situation (Kayser et al., 2014; Schulz, Hartung, & Riva, 2013). For example, studies revealed that parents in Australia, United States, and South Asia reported that having faith and trust in doctors, as well as receiving support from church is necessary and helpful to them in remaining positive during the illness of their child (Banerjee et al., 2011; Brody & Simmons, 2007; Jackson, Tsantefski, Goodman, Johnson, & Rosenfeld, 2003). Greek and Korean parents reported coping strategies related to maintaining family integration and an optimistic outlook for the situation as being the most helpful (Han, Cho, Kim, & Kim, 2009; Patistea, 2005). However, German parents of children newly diagnosed with cancer often use a withdrawing or backwards-directed coping behavior and reported limited desire to

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seek social support (Goldbeck, 2001). This demonstrated that the culture context may affect the coping options available to an individual when facing stress. Members of different cultures may consider and respond differently to stressors, with respect to coping goals, strategies, and outcomes (Kuo, 2011).

Chinese individuals live in a multicultural context with multiple views. The main ideology is based on Confucianism, Familism (a part of Confucianism), and Collectivism (Qiu, Sit, & Koo, 2018; Xiao et al., 2014). The basic guidelines of Confucianism essentially form a series of duty-bound obligations that stipulate the acceptable and unacceptable behavior of a "proper and right" individual. Confucianism teaches harmony and family loyalty. Achieving happiness and good health depends on respecting the members of the community. The values of familism are important in Chinese culture, which regard caring for family members as the responsibility of the family (Xiao et al., 2014). In addition, Chinese individuals advocate the values of collectivist, which prioritize group interests over individual interests. For the sake of family harmony and well-being, individuals are strongly advised to sacrifice their personal interests (Qiu, Sit, & Koo, 2018).

In modern society, Chinese culture continues to affect the perceptions and behaviors of Chinese individuals (Shi, 2013). Thus far, few studies have attempted to identify the strategies of family coping in Chinese culture, related to a child's hospitalization for the treatment of cancer. In recent years, the incidence of childhood cancer in mainland China has been increasing. The families of children hospitalized in pediatric oncology units are a considerable target group demanding special attention. In clinical settings, the limited availability of information may affect the delivery and quality of care to families. In-depth understanding regarding family coping may assist clinical nurses to devise and develop supportive interventions tailored to the particular situation and needs of the patient's family. This study employed an exploratory approach to investigate the strategies of family coping during a child's hospitalization for the treatment of cancer in mainland China.

## Methods

### *Study design, settings, and sample*

A qualitative inductive content analysis was conducted (Sandelowski, 2000). Childhood cancer has a tremendous impact on a child's family, especially the parents (Benedetti, Garanhani, & Sales, 2014). Usually, the parents of a patient determine the coping of the entire family. Purposive sampling was employed to select parents as interviewees. With the help of the nurse, we obtained access to the electronic medical records of the patients. The sampling included families with children hospitalized for varying periods (including readmission) to capture the maximum variation in the coping experience. One of the parents from each family was invited as a proxy if she or he had a child aged ≤14 years hospitalized for the treatment of cancer in an oncology ward. Parents of children hospitalized for <24 h, or those who experienced an emergency (e.g., massive hemorrhage) were excluded from the present study.

### *Data collection and analysis*

Data were collected using semi-structured interviews conducted from November 2017 to June 2018. The settings for this study were the pediatric oncology departments of four Grade III Level A hospitals in mainland China. The interviews were conducted by a researcher. The researcher recruited the participants with the assistance of a nurse from each pediatric oncology department. The researcher explained the objectives and significance of the present study to the parents. The parents were requested to sign the statement of informed consent prior to their participation in the face-to-face interviews. The investigator responsible for conducting the interviews was experienced in conducting qualitative research. The interviewer had previously performed a cross-sectional study involving this population, and had established rapport with the parents of the patients. Recruitment and data collection regarding strategies of family coping proceeded until data saturation. Of note, the interviews were conducted in a designated room in each of the participating institutions. The researcher asked the participants regarding their preferences for the interview place. Most parents wished to continuously monitor their children; thus, the interviews took place in the wards at the children's bedsides.

Initially, the interviews consisted of general questions, followed by open-ended questions related to family coping. An interview guide based on the Double ABC-X model was used during each interview. The Double ABC-X model describes how a family responds to a stressful event (Kong, 2010; Lee, Parker, DuBose, Gwinn, & Logan, 2006). Coping is the central concept in this model. It is used to describe families' efforts to achieve a new level of balance after a stressful event (Kong, 2010). The interview guide explored parental perceptions pertaining to: a) the impact of the child's hospitalization for cancer treatment upon the family; b) the coping strategies families used to deal with their child's hospitalization for cancer treatment; and c) the effectiveness of their coping strategies. Interview questions used in the study are presented in Table 1. Owing to the nature of the semi-structured interviews, the questions were rephrased based on responses or understanding of the question. At the end of each interview, the researcher restated or summarized the provided responses, and asked the participant to confirm the accuracy of the record. The interviews were conducted in Mandarin. The duration of each interview was 45–90 min. All participants agreed to have their interviews audio-recorded. Information related to the hospitalized children was mainly obtained from their medical records.

The audio recordings were transcribed verbatim within 24–48 h after the interview, and the transcripts were analyzed through qualitative content analysis (Graneheim & Lundman, 2004; Hsieh & Shannon, 2005). The transcripts were initially open-coded word-by-word and line-by-line. Two experienced qualitative researchers examined the data in detail to identify "meaning units" and encode them. Upon completion of coding, a 3-day meeting was arranged to discuss the codes, resolve any disagreements, and reach a consensus. The codes were sorted into subcategories based on their interrelation. Depending on their relationships, the number of subcategories was reduced into categories. Following the formation of the categories, the members of the research team convened to reach a consensus. An audit trail was applied to provide evidence that a process of data analysis, reduction, and synthesis was performed, leading to the reported findings.

## Ethical considerations

Ethical approval was obtained from the ethics committees of university institutions.

**Table 1**
Semi-structured interview guide.

| No. | Questions |
|---|---|
| 1 | How is your child's hospitalization affecting you and your family? (Probe for effects on work, finances, and family activities.) |
| 2 | How is having a child in hospital affecting your family relationships? (Probe for effects on spousal, parent-child, sibling, relatives, and friends relationships.) |
| 3 | Some families feel they can deal with their situation, other families have the feeling they are collapsing under the strain. What is it like for your family? |
| 4 | How have you and your family responded to these things? Would you give me an example? |
| 5 | What would help your family to cope better with your situation? Would you give me an example? |
| 6 | Is there anything else that you would like to tell me about your coping experience during your child's hospitalization? |

## Demographics

Approximately 120 parents were eligible for the interview in the four participating hospitals. Of those, we invited a total of 23 parents to participate in the study. Two parents were unavailable to participate into the study because of discharge from the hospital. Eventually, 21 parents (i.e., five fathers and 16 mothers) from different families contributed to this study. The age of the interviewees ranged from 30 to 43 years. Among the 21 investigated families, 11 and 10 were extended and nuclear families, respectively. At the time of the interview all children were undergoing chemotherapy. Notably, the vast majority of families (n = 18) had children diagnosed with acute lymphoblastic leukemia. The duration of hospitalization ranged from 18 to 360 days, while readmissions ranged from one to 15 times. All children were aged <12 years old. Table 2 presents the profiles of the 21 families.

## Findings

Four types of coping strategies emerged from this study: (1) increasing family strength; (2) maintaining optimistic thoughts; (3) seeking external support; and (4) not disclosing unfavorable information.

### *Increasing family strength*

This theme, increasing family strength, describes the efforts of families to assist bonding with their family members. It shows how a family mobilizes its internal resources to cope with a child's hospitalization, and it is demonstrated by family cohesiveness and mutual support.

Family cohesiveness represents the perceptions of family members regarding the accessibility and availability of emotional bonding. Families characterized by high cohesion functioned in a complementary pattern during a child's hospitalization for the treatment of cancer. Several parents indicated the importance of family cohesiveness, which was considered an effective and strong resource of the family. According to the parents, family members are an important source of support during this challenging period.

> "What makes me feel most comfortable and relieved is my family. We understand each other, work together, and are all of one mind. Family members bond together. My husband said we should work together as a family and be of one mind. Otherwise, we cannot overcome the stressful situation."
>
> [(Mother, 36 years)]

In the present study, the parents reported that their family members were supportive of one another. In general, both parents accompanied the hospitalized children receiving treatment for cancer, working together to overcome the occurrence of treatment-related adverse effects.

> "The whole family was mobilized to handle the current situation. We share responsibilities together. Because we need to prepare food for the child by ourselves, one parent will go to prepare food and the other will stay at the child's bedside. Both of us stayed in hospital for more than 1 month during the first treatment course, since the child was experiencing serious emesis and two of us could share the responsibilities of childcare."
>
> [(Mother, 31 years)]

> "We family members understand each other. To be honest, life is not easy for anyone in my family. It is extremely tiring for my mother-in-law to care for my little daughter and older grandmother at home. I also feel tired caring for my hospitalized son and cannot sleep well at night. Therefore, we all appreciate each other."
>
> [(Mother, 42 years)]

### *Maintaining optimistic thoughts*

This theme, maintaining optimistic thoughts, refers to coping strategies of parents to maintain mental stability through optimistic thinking. This involves taking a favorable view of events or conditions, and expect the most favorable or positive outcome. About 24% (5/21) of parents chose to be optimistic regardless of the events encountered in their lives. Notably, a mother attempted to strengthen her optimistic view using the successful treatment experiences of other children with cancer. In addition, a father maintained his optimistic by comparing their situation with those of families having children with incurable diseases. He considered that they were much luckier.

> "What I wish is that my husband's leg will recover soon and I can take good care of my son. Being alive is better than anything. Sometimes I am quite optimistic. It is useless to worry every day. Some children who are younger than my child can be cured; my child also can be cured."

**Table 2**
Participant characteristics (n = 21).

| No | Interviewees/age (Y) | Family structure | Child's diagnosis | Total days of all admissions (ds) | Number of readmissions (ts) | Age of child (Y) |
|---|---|---|---|---|---|---|
| 1 | Mother/36 | Nuclear | ALL | 100 | 4 | 11 |
| 2 | Father/40 | Nuclear | ALL | 21 | 1 | 12 |
| 3 | Mother/32 | Nuclear | ALL | 360 | 9 | 7 |
| 4 | Mother/36 | Extended | ALL | 180 | 11 | 9 |
| 5 | Father/35 | Extended | ALL | 35 | 2 | 2 |
| 6 | Mother/35 | Nuclear | ALL | 350 | 12 | 9 |
| 7 | Father/36 | Extended | Malignant rhabdomyoma | 150 | 13 | 4 |
| 8 | Mother/32 | Nuclear | ALL | 22 | 1 | 3 |
| 9 | Mother/32 | Extended | ALL | 150 | 2 | 7 |
| 10 | Mother/30 | Nuclear | ALL | 100 | 6 | 4 |
| 11 | Father/32 | Nuclear | ALL | 120 | 10 | 4 |
| 12 | Mother/38 | Nuclear | ALL | 127 | 1 | 10 |
| 13 | Mother/41 | Extended | ALL | 135 | 7 | 11 |
| 14 | Father/39 | Extended | ALL | 260 | 8 | 10 |
| 15 | Mother/36 | Extended | Neuroblastoma | 35 | 2 | 3 |
| 16 | Mother/32 | Nuclear | ALL | 61 | 3 | 4 |
| 17 | Mother/31 | Nuclear | ALL | 108 | 6 | 3 |
| 18 | Mother/30 | Extended | ALL | 163 | 4 | 4 |
| 19 | Mother/42 | Extended | Malignant lymphoma | 340 | 15 | 12 |
| 20 | Mother/43 | Extended | ALL | 90 | 4 | 6 |
| 21 | Mother/39 | Extended | ALL | 150 | 8 | 9 |

ALL: Acute Lymphoblastic Leukemia.

[(Mother, 35 years)]

"The most fortunate thing is that my child still has a chance to be cured…… We are much luckier than others. There is a silver lining that my child can be cured. Every family has its own problems, no exception."

[(Father, 39 years)]

*Seeking external support*

The theme, seeking external support, describes the efforts of families to actively seek external professional and social support to cope with the challenges during the hospitalization of their children. External support alleviated, to a certain extent, the psychological and financial burdens of families.

*Professional support*

The subtheme, professional support, refers to supports provided by medical professionals (e.g., doctors and nurses), including informational (i.e., related to cancer, treatment, childcare, and resources) and emotional support.

"The first day I came here, the nurse told me that the child should eat less fatty food and fully cooked vegetables and not to eat too much fruit during chemotherapy and provided guidance for childcare. That really can relieve a lot of my burden. I talk with XX (a nurse) when I am in a bad mood and she always says something that can comfort me. Then I feel relaxed."

[(Mother, 41 years)]

"A nurse told me, 'There is a child whose situation is similar to your daughter's, and his treatment course has almost been completed. You can talk to his parents and gain some experiences from them.' The nurse was so kind. I appreciate what the nurse has done for my family."

[(Father, 40 years)]

*Social support*

The subtheme, social support, refers to received support from relatives, friends, and other families in the hospital. Relatives and friends could be instrumental in childcare, financial assistance and emotional support for families during the hospitalization of children.

"I like to talk with my sister and friends. This allows me to feel relaxed. My sister helps me a lot. I do not have to worry about preparing food, renting a unit, and so on. My sister manages all these things for us."

[(Mother, 32 years)]

"My friends call me frequently. I told them my child was receiving chemotherapy. They showed concern for my child and me. They also provided financial support to my family."

[(Mother, 36 years)]

Moreover, parents sought information and emotional support from other families who were experiencing similar situations in the hospital. The shared information was considered useful and reliable because of the similar and real experiences of these families. The sharing of information and emotional support was usually mutual. Parents valued this kind of support because of its comforting and relaxing nature.

"We parents usually talk about how to care for our hospitalized children……how to prevent infection and what we to do when children get infected. We always share some childcare tips. Some families have stayed here for a long time and they have rich experiences. I feel confident when chatting with these parents……We also like to talk with families having children who have completed the treatment when they come back for reexamination."

[(Mother, 35 years)]

"To be honest, what we parents can do is to comfort each other. Everyone here is very sad. We have to face all difficulties. We are stuck in the hospital, we should not isolate ourselves. There are many difficulties ahead of us, it is important for us to find some time to take a break and relax. We parents can talk with each other at any time. This can allow us to relax for a while."

[(Father, 36 years)]

*Not disclosing the unfavorable information*

This theme, not disclosing the unfavorable information, describes the efforts of parents to minimize the effects of a child's hospitalization on the families by holding back unpleasant information from the family members, friends and relatives.

*Shielding the hospitalized children from unfavorable information*

The subtheme, shielding the hospitalized children from unfavorable information, describes parents' efforts to protect the hospitalized children by concealing the diagnosis of cancer and related information from their children. According to a mother, the reason behind the filtering of information was that her hospitalized child was unable to understand and accept the information.

"He knows a little about his disease. He is too young to understand. I never explain it to him."

[(Mother, 32 years)]

*Protecting other family members from unfavorable information*

The subtheme, protecting other family members from unfavorable information, describes the efforts of parents to minimize their psychological burden by concealing the unfavorable information from family members.

"I would only share good news with my wife. She has already borne heavy psychological burdens. I know more about the cancer and my child's condition, I can handle it better. She knows little about this, so I only tell her what is good while concealing the bad."

[(Father, 32 years)]

*Avoiding discussions with friends*

The subtheme, avoiding discussions with friends, reflects parents' unwillingness to share their negative feelings and news with non-family members (i.e., friends or relatives). This avoidance was attributed to two factors. Firstly, parents did not wish to further worry their friends and relatives. Secondly, they worried that their friends may view the family differently, when knowing the truth. What a family dislikes the most is being labeled as pathetic.

"I do not want to bother them (friends and relatives). I am the kind of person who reports only good news. People are happy when sharing some good news, but if it is the bad news, I do not want to tell…."

[(Mother, 43 years)]

"Sometimes, they (friends and relatives) are more nervous than me because they think my son is diagnosed with an incurable disease and we must be 'pathetic'. That is why I do not like to contact them."

[(Mother, 32 years)]

## Discussion

The findings obtained from this qualitative research highlighted that families used a range of coping strategies, generating four patterns. These patterns are discussed below.

### Increasing family strength

Family members attempted to emotionally and practically support one another against the challenges caused by the hospitalization of their children. This is consistent with findings reported by previous studies, showing that family cohesion and mutual support were protective and recovery factors that can promote healthy family coping, when exposed to significant stressors or adversities (Ahlert & Greeff, 2012; Hamama-Raz, Rot, & Buchbinder, 2012). Bourke-Taylor et al. (2012) indicated that a family with high cohesion could better adapt to the stress of caring for a child with an illness. Another study revealed that the perception of a supportive and caring family environment was closely associated with better quality of life and reduced symptoms of anxiety and depression among family members (Moreira, Frontini, Bullinger, & Canavarro, 2013). The increased emotional and physical bonding among family members can assist a family in realizing its strengths, and become stronger as a unit. This is consistent with the Chinese culture, which emphasizes family interdependence and cohesion (Chinese Culture, 2015). Chinese individuals consider the family bonds sacred, and honor them accordingly. Family bonds are stronger versus any kind of social bond not based on kinship (Chinese Culture, 2015).

Given the importance of family cohesion, family-centered interventions aiming to facilitate support between family members – in terms of coping with the hospitalization of children with cancer – seem to be particularly useful in Chinese contexts. Further studies should test whether nursing interventions, aiming to mobilize family resources (e.g., problem-solving communication), are effective in promoting the adaptation of families during hospitalization of children for the treatment of cancer. This study also demonstrated that family culture should be taken into consideration when developing interventions for Chinese patients.

### Maintaining optimistic thoughts

Maintaining optimistic thoughts prevented parents from concentrating on the negative outcomes, and distracted their minds from stressful situations. In the present study, a number of parents chose to be optimistic, regardless of the events encountered in their lives. These parents attempted to strengthen their optimistic view by focusing on the successful treatment experiences of others, or making downward comparisons to elevate their self-regard (Gibbons, 1986). According to parents of children with cancer, being optimistic may be one of the most helpful coping strategies (Fotiadou, Barlow, Powell, & Langton, 2008). Another study stated that parents obtained a positive focus when they realized that other families were experiencing more challenging situations (Bjork, Wiebe, & Hallstrom, 2005). Miedema and associates (Miedema, Hamilton, Fortin, Easley, & Matthews, 2010) further discovered that parents tended to choose other families facing grater challenges, in order to view themselves advantageously. This allowed parents to perceive that the hospitalization of a child with cancer was manageable. This realization may be very helpful to those families who thought that their situation was uncontrollable, and with which they must deal, and move on.

### Seeking external support

Similar to previous studies (Hoekstra-Weebers, Wijnberg-Williams, Jaspers, Kamps, & van de Wiel, 2012; Miedema et al., 2010), seeking external support was another important coping approach employed by families with children hospitalized for the treatment of cancer. It includes professional and social support. Healthcare professionals were valuable external sources of informational and emotional support for families during the hospitalization of their children. This finding was consistent with those reported by previous studies, showing that available information helps families to face stressful situations, gain a sense of control, and overcome their insecurity (Arabiat, Al Jabery, Abdelkader, & Mahadeen, 2013; Hopia, Tomlinson, Paavilainen, & Astedt-Kurki, 2005; Monterosso, Kristjanson, Aoun, & Phillips, 2007). According to the results, the provision of up-to-date health information by healthcare professionals promotes family adaptation. Moreover, in this study, emotional support from nurses enhanced the psychological adjustment of parents during hospitalization of their children for the treatment of cancer. Furthermore, previous studies indicated that emotional support is helpful in the adjustment of relatives of patients with cancer (Grahn & Danielson, 1996; Northouse, Templin, Mood, & Oberst, 1998). Parents wished to share their inner feelings and concerns with nurses, whose comfort could relieve their psychological burdens to a certain extent. This implied that parents tended to place greater importance on the provision of emotional support by nurses. Therefore, nurses should have the sensitivity to recognize the needs of families for emotional support and take an initiative to understand their inner feelings. When parents experience serious emotional challenges, referral to a counselor, psychologist, or psychiatrist is necessary.

The findings of this study revealed that families with hospitalized children with cancer require social support. Parents considered parent-to-parent support as helpful, reliable, and comforting. They expressed their desire to interact with other families facing similar experiences. Exchange of useful and practical information has been identified as an important element of parent-to-parent support (Law, King, Stewart, & King, 2001; Sullivan-Bolyai & Lee, 2011). Another study further revealed that shared experience fostered a sense of belonging and support, enhanced the confidence of families to cope with the situation, and reduced their sense of isolation (Law et al., 2001).

The present and previous studies suggested that perceived similarity of experiences and mutuality of support formed the basis of an equitable parent-to-parent connection. Common experiences may enable families to fully understand each other and accept thoughts and behaviors without judgment. Self-help groups, the most common parent-to-parent connection, are becoming increasingly popular in North America and the UK (Law et al., 2001). Parent-to-parent connection offers a unique form of support that may complement nursing services to a certain extent. However, in this study, there was only one informal self-help group in one of the four participating oncology departments. Future studies are warranted to identify the obstacles for the establishment of a self-help group, and connect families for mutual support.

### Not disclosing unfavorable information

As evident with this theme, parents shielded their hospitalized children and other family members from unfavorable information, as well as avoiding discussions with friends. In contrast to the UK and USA, the disclosure of the diagnosis of cancer to children is rare in China (Parsons et al., 2007). This is similar to the practice observed in Japan, where parents prefer to withhold the truth regarding diagnosis (Watanabe, Nunes, & de Abreu, 2014). Usually, pediatric oncologists rely on parents to make a decision regarding the timing, method, and type of information to be shared with their children. However, a number of parents did not wish to disclose the diagnoses to their children. In present study, parents felt that their children would be unable to comprehend the provided information. The proportion of parents who

were hesitant to disclose information was not determined in this study, and depended on the age of the patient. This is consistent with a study conducted in Japan, where disclosure of the diagnosis by the parents depended on the age of their children and level of development (Watanabe et al., 2014). Overall, the decisions made by parents regarding the disclosure of information related to the disease appeared to be influenced by their perceptions of their children's maturity.

In China, the treatment environment may not facilitate the non-disclosure requests by parents because the hospital departments are often identified with the terms 'oncology' or 'hematology'. Hospitalized children may infer the diagnosis from information, such as the name of the department. This may not necessarily protect them from fear or worry. On the contrary, it may result in a misunderstanding that the illness is a dangerous secret that should not be discussed. A previous study found that the psychological adjustment of children and their families could be improved by disclosing the diagnosis in the early stages of the treatment (Slavin, O'Malley, Koocher, & Foster, 1982). Discussing a life-threatening illness with children is a complex task. A suggested approach is to involve the children in the parent-doctor communications. This allows the doctor to deliver the news to the child in the presence of the parents. However, the personal preferences of parents need to be respected. Permanent change of practice or advice without careful consideration of the clients' readiness may lead to strong resistance or negative emotional responses. Additional studies investigating the effect and implications of not disclosing unfavorable information as a coping strategy are warranted. Such studies would inform clinicians regarding the direction to follow, and help them advise parents accordingly.

Sharing negative emotions and unfavorable information with family members is a difficult decision. This depends on how parents evaluate the ability of their family members to deal with the unpleasant news. When parents thought that their family members did not have this ability, they tended to protect them by concealing the unpleasant information and suffering the psychological burden alone. As Rarick (2007) reported, the concept of self-sacrifice is common in traditional Chinese families. It is common for individuals to sacrifice themselves for the welfare of the family. The resilience exhibited by Chinese individuals during stressful events is largely attributed to their culture, valuing self-sacrifice for the collective good.

For the purpose of protecting other from worrying, a number of parents in this study were reluctant to share information with their friends. This may be determined by the Chinese culture, in which individuals tend to 'share happiness but not worries (Bao Xi Bu Bao You)'. Another reason may be that parents were afraid of being labeled as pathetic or appearing to be weak. They did not wish to 'lose face' in front of others. This is closely related to the Chinese 'Face-culture (Mian Zi)'. 'Face (Mian Zi)' is regarded as a 'self-image' experienced by an individual because of others' evaluations of a specific situation (Hwang, 2006). Individuals may have experienced feelings of gaining or losing face because of positive or negative social evaluation (Hwang, 2006; Hwang, 2010). Feelings of 'losing face' experienced by the parents may result in some assistance being ineffective and/or unsatisfying during the hospitalization of their children. This implied that not all healthcare professionals actually deliver effective help, and some may even increase the psychological burden of parents. This reminds clinical nurses that the influences of Chinese culture on family coping should be taken into consideration during the development and implementation of family-centered interventions.

## Limitations

There were several limitations in the present study that should be acknowledged. Firstly, this study included only parents as the respondents. The perceptions of parents may not accurately reflect the perspectives of all family members, limiting the richness of the findings. However, their opinions cannot be undervalued and are crucial for an initial assessment of families in clinical settings. Secondly, most of the participants in the present study were mothers. This is indicative of the fact that, usually, mothers serve as the primary caregivers and remain close to their children in hospital. Although very few fathers participated in the study as proxy informants, their perspectives are certainly worthy of further exploration. Thirdly, the wide range of patient ages and family experiences (i.e., 1–15 hospital readmissions) may lead to variation in family coping strategies. Therefore, the present data may not be sufficient to note such differences. Lastly, this study was limited to families with hospitalized children for the treatment of cancer in mainland China. Therefore, the results may not be generalizable or transferable to other populations worldwide.

## Implications for clinical practice

The findings of the present study may assist healthcare professionals in understanding how Chinese families cope with the challenges caused by the repeated and prolonged hospitalizations of their children. These coping strategies include increasing family strength, maintaining optimistic thoughts, seeking external support, and not disclosing unfavorable information. With the implementation of appropriate interventions, families can be supported in dealing with these challenging situations. Interventions that foster "family inner strength", by encouraging families to seek support and comfort among themselves can be instrumentation in facilitating family adaptation (Ghaffari, Fatehizade, Ahmadi, Ghasemi, & Baghban, 2013). Parents may find the mindfulness strategy to be helpful in maintaining an optimistic view of their children's situation (Chan, Zhang, Bögels, et al., 2018).

Other important strategies also included strengthening the linkages to their natural pre-existing support, mobilizing families to explore new resources, and referring struggling families to others who are experiencing similar situations (Sampogna, Luciano, Del Vecchio, Malangone, et al., 2018; Sheikh, Ashraf, Imran, et al., 2018). Additionally, involving the children in the parent-doctor communications may alleviate the physiological burden born by parents regarding the disclosure of disease-related information to their children. Finally, foreign clinical nurses should take culture into consideration when developing interventions for Chinese individuals.

## Implications for research

Findings derived from the present study have opened up a range of potential areas that could be addressed in future studies. Firstly, future studies could analyze whether the perspectives of spouses are independent from one another when both parents participate in caring for the hospitalized child, and whether the coping strategies change with the duration of hospitalization. Secondly, the present study focused on parents' perspectives of family coping. Further research within the Chinese community should examine other family members' opinions. Are there any discrepancies between the parents and the children; or between the hospitalized child and the healthy siblings? Lastly, to gain a more complete and thorough understanding of family coping during children's hospitalization for cancer treatment, future studies should involve larger samples and much wider groups of respondents from different backgrounds.

## Conclusion

The findings of this study, which emerged from interviews of 21 parents, contributed to a more comprehensive understanding of family coping strategies of Chinese families during hospitalization of their children for the treatment of cancer. These families had actively adopted multiple coping strategies to overcome the stressful situation. The influence of Chinese culture on family coping should be taken into consideration during the development and implementation of family-centered interventions in clinical settings.

## CRediT authorship contribution statement

**Qi-Yuan Lyu:** Project administration, Conceptualization, Data curation, Formal analysis, Writing - original draft, Writing - review & editing. **Mei-Fen Zhang:** Methodology, Validation, Writing - review & editing. **Xiu-Qing Bu:** Validation, Writing - review & editing. **Xue-Zhen Zhou:** Data curation, Validation, Writing - review & editing. **Xue Zhao:** Validation, Writing - review & editing.

## Declaration of Competing Interest

None.

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