

The parental experiences of caring for children with childhood cancers in Singapore: a pilot focus group study

Proceedings of Singapore Healthcare
1–7

© The Author(s) 2020

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/2010105820935915

journals.sagepub.com/home/psh

Beron Wei Zhong Tan¹,  Alexis Clarke¹, Lois Ling'en Teo¹,
Jasper Weng Kong Tong² and Mei-Yoke Chan³

Abstract

Background: Research on the parental experiences of caring for children diagnosed with cancer in Singapore are limited and not well understood.

Objectives: We conducted a pilot focus group to understand the experiences of Singaporean parents whose child had survived cancer.

Methods: Using convenience sampling, five parents were invited to participate in a focus group discussion regarding the psychosocial needs at the time of cancer diagnosis and into survivorship. The discussion was transcribed verbatim and analysed using Braun and Clarke's 6-step approach to thematic analysis.

Results: The analysis revealed three major themes of intrapersonal impact, interpersonal connectedness and financial implications.

Conclusions: The identified themes indicated some universal and unique caregiving experiences among Singaporean parents and those reported in western and other Asian cultures. In particular, the findings provided an update on the parental experiences of caring for children with cancer in Singapore and highlighted the need for ongoing research and the development of early and holistic psychosocial support services for these parents.

Keywords

Parental experiences, childhood cancer, Singaporean, psychosocial, Asian cultures

Introduction

In Singapore, 1400 children were diagnosed with cancer between 2008 and 2017.¹ Over three-quarters of those diagnosed with childhood cancers achieved remission and progressed to survivorship.¹ However, there are long-term negative consequences of cancer on child survivors including poorer physical,² cognitive³ and psychosocial functioning,⁴ when compared to their healthy peers.

The psychosocial impact of childhood cancer on children and their family is an important area of focus. Klassen and colleagues⁵ found significant caregiver and family stress following a child's cancer diagnosis, which also changes the family dynamics and roles. In a comprehensive qualitative literature review,⁶ the authors identified eight parental themes expressed by 784 participants from studies conducted from 11 countries. The themes included the acceptance of the child's diagnosis, need for control and information, negative implications of cancer (e.g. parental role changes, loss of

child's healthy status) and the process of adapting to family changes. In addition, other themes such as gender differences in coping and roles between father and mother; emotional and practical support; positive gains (e.g. developed insights and meaning into diagnosis, improved family relationships etc.); and some differences in support-seeking behaviours between cultures (e.g. American Chinese and Caucasians) were also reported. The review by Gibbin et al.⁶ provides a valuable understanding of the parental experiences in caring

¹Psychology Service, KK Women's and Children's Hospital, Singapore

²Allied Health Office, KK Women's and Children's Hospital, Singapore

³Haematology/Oncology Service, KK Women's and Children's Hospital, Singapore

Corresponding author:

Beron Wei Zhong Tan, Psychology Service, KK Women's and Children's Hospital, 100 Bukit Timah Road, Singapore 229899, Singapore.

Email: beron.tan.w.z@khh.com.sg



for their children diagnosed with cancer, and particularly on the areas of support required by these parents. Although the review included some Asian studies, it is difficult to generalise these findings to families in Singapore. As cultural factors can partly influence the psychosocial impact of cancer, these factors should be considered in research.^{7,8}

Gray et al.⁷ reviewed 72 articles in paediatric psycho-oncology and concluded that cultural differences were influential throughout the cancer journey, particularly on how families perceive, respond and cope with the cancer diagnosis. Similarly, Lim and colleagues⁸ reported significant cultural differences that may underlie differences in quality of life among caregivers of cancer patients in various countries. In particular, Lim et al.⁸ found lower quality of life among caregivers in Singapore compared to those from western countries. Nevertheless, the study of Lim et al.⁸ included individuals caring for significant others diagnosed with cancer that ranged from 18-year-olds to above 65-year-olds, rather than specifically to children. However, the findings of Lim et al.,⁸ together with those from the western literature,^{6,7} emphasised the importance of considering cultural influences in psycho-oncology research.

Regrettably, there are very limited studies conducted in Singapore that have examined the long-term psychosocial effects of childhood cancers.⁸⁻¹¹ Studies in Singapore have identified a lower quality of life among caregivers of individuals with cancer, including factors such as financial burden and negative psychosocial implications on the family.⁸⁻¹⁰ Those studies, although informative, included a subset of non-Singaporean paediatric patients. Thus, it is unknown if these findings are applicable to Singaporean families.^{9,10} A mixed methods study of Singaporean parents caring for children with cancer was conducted in 1998.¹¹ Ow¹¹ interviewed and administered questionnaires to parents of children with cancer at two time points across two hospitals, within 3 months ($n=32$) and within 3 to 6 months ($n=22$) of diagnosis. These parents reported emotional distress across the two time points, including anxiety, sadness, difficulty in accepting the child's diagnosis, guilt and perpetual worrying about the child's prognosis and the risk of relapse. In addition, these parents rated their own emotional needs as more important over practical matters, such as financial and familial interactions. The study by Ow¹¹ highlighted the importance of parental emotional needs and the need for early parental support following their child's cancer diagnosis. Unfortunately, the age of the children and their parents were unreported. Furthermore, the study by Ow¹¹ was conducted more than two decades ago, thus there is a need to review current parental experiences in Singapore.

Interestingly, the findings of Ow¹¹ differed from the recent Singapore studies,^{12,13} that reported parents of children with various chronic illnesses focused on the practical aspects of coping at the early stage of receiving their child's diagnosis. Emotional needs, however, were more likely to surface after children had died from their illness. Nevertheless, those recent studies^{12,13} were based on the retrospective experiences of bereaved parents whose children had died from a number of chronic illnesses including cardiac and renal conditions, cerebral palsy, cerebral vein thrombosis and childhood

cancer. Moreover, as the loss of a child can result in significant changes in parents' perception of life experiences¹⁴ (e.g. finding personal meaning in child's death), the differences between the study of Ow¹¹ and the recent studies^{12,13} may also be influenced by participants' characteristics (i.e. non-bereaved vs. bereaved parents). Such differences in the literature indicated the need for more studies to explore the parental experiences of caring for childhood cancer survivors in Singapore.

Purpose

In summary, there is a dearth of research on the psychosocial challenges faced by Singaporean parents of children with cancer. The only Singaporean study describing these challenges is dated.¹¹ Other Singapore studies included the adult population,⁸ a subset of non-Singaporean child participants,^{9,10} and bereaved parents' experiences and other childhood conditions.¹² Hence, this pilot study sought to explore parental experiences of Singaporean parents whose child had survived cancer. The outcomes of this pilot study would identify areas of psychosocial needs to direct future research and clinical services. This study forms part of a larger research project exploring late effects and the psychosocial impact of childhood cancer in Singapore.

Methods

Design

This study used a qualitative approach because it is ideally suited to exploring areas where there is limited research. In particular, we employed a realist stance with an inductive approach that was driven by the emerging data. A semistructured interview script and a range of topic cards depicting psychosocial themes (e.g. balance between caring for the child and employment; impact on the family; isolation; communication with healthcare professionals; emotional needs, etc.) were used to facilitate discussion retrospectively regarding the psychosocial needs of parents following their child's cancer diagnosis. The topic cards were derived based on the existing literature⁶ and were chosen to support the facilitation of an open discussion within the Singaporean culture, in which the explicit discussion of emotions may be difficult to elicit.¹²

Data collection

Using convenience sampling, parents of children with cancer were invited to participate in a single focus group, following a paediatric oncology educational event in Singapore. The focus group was facilitated by two co-authors (AC and LT), and the session was conducted in March 2018, and lasted for 90 minutes. AC is a researcher experienced in qualitative research and both facilitators (AC and LT) are registered clinical psychologists experienced in running focus groups. A group of parents was asked to select the topic cards that were most relevant to them during the initial and subsequent cancer treatment phases in the hospital. Using

Table 1. A summary table of participants' demographic variables (N=5).

Demographic variables	n*	Mean (SD)	Range
Parental age	5	44 (4.1)	40–49
Parental gender			
Mother	4	–	–
Father	1	–	–
Ethnicity			
Singaporean Chinese	3	–	–
Singaporean Malay	2	–	–
Children's cancer			
Neuroblastoma	2	–	–
Acute lymphoblastic leukaemia	2	–	–
Children's age at diagnosis	4	5 (4.0)	1–11
Time since diagnosis (survivorship years)	4	5 (3.2)	2–9

The mean and range values were presented in years.

*Sample sizes differed as there were five parents of four children (i.e. two of the participants were father and mother of the same child).

open-ended prompts, they were asked to explain their selection, and reflect on the changes as their child progressed through their medical treatment. Finally, parents were asked if there were any other factors that were important to them other than the topic cards to ensure that no other factors were missed. The focus group session was audio-recorded, and transcribed verbatim. All data were anonymised and each participant was assigned a numerical identifier (e.g. P01; P02).

Participants

Ethics approval was obtained from SingHealth Centralised Institution Review Board (CIRB, reference number 2017/2873). Written informed consent to participate in the focus group was obtained from five parents of four children (i.e. four mothers and one father); of which, two of the parents were a married couple (see Table 1 for demographic information).

Data analysis

Data were coded and analysed based on Braun and Clarke's six-step approach to thematic analysis.¹⁵ These included the process of becoming familiar with the data through the repetition of reading the transcribed data, documenting brief notes and drafting codes; consolidating codes into respective themes and subthemes; revisiting and ensuring that these themes were consistent with the data, and to the final process of refining the themes.¹⁵ Initial coding was facilitated by Microsoft Excel. Subsequently, the final themes and subthemes were described and assigned an appropriate 'heading'. As a verification process, an investigator triangulation¹⁶ was conducted by one of the co-authors (BT) not involved in the data collection. The identified author was shown transcripts without codes, themes or subthemes. Without preconceived assumptions, the identified author independently generated codes, subthemes and themes, which were then compared to those derived by the authors (AC and LT) who conducted

Table 2. The linkage between major themes and subthemes.

Major theme	Subtheme
Intrapersonal impact	Emotional distress Uncertainty Hope
Interpersonal connectedness	Emotional validation Knowledge
Financial implications	Financial strain Accessing funds

the focus group. Any inconsistencies in the themes and subthemes were resolved through discussion. Finally, all authors reviewed the final themes and subthemes, and a general consensus was achieved.

Results

Three major themes were identified namely: (a) intrapersonal impact; (b) interpersonal connectedness; and (c) financial implications. Table 2 shows the association between the major themes and subthemes.

Intrapersonal impact

Intrapersonal impact described the emotional experiences of parents and included three subthemes of emotional distress, uncertainty and hope. In terms of emotional distress, parents described the initial difficulties in accepting the child's diagnosis along with ongoing trauma, which included the comparison of their child's general functioning with other healthy children.

The first 3 months was very hard. I was crying myself to sleep every night. P02

I think I never got to heal, the PTSD [post-traumatic stress] for parent, it still haunts me. P01

The emotions, the child doesn't understand what's going on and you have no choice and you compare your child with another person's child. P01

Regarding uncertainty, parents described the challenges managing ongoing uncertainty regarding their child's health, the possibility of reoccurrence and treatment late effects.

I would say she survived till now, although it's just two years. P01

Finding out that she will have late effects, heart problems and so on which is the uncertainty. How do you manage an uncertainty when you don't know what she is going to go through for the next twenty years. P01

Finally, under the subtheme of hope, parents described the importance of remaining hopeful and positive regardless of their child's prognosis. They described drawing on others' experiences as a source of hope.

The most important thing is must have positive thinking. P03

I think it gives us hope to know that people have survived. P05

Interpersonal connectedness

Parents reported being emotionally validated through connecting with other parents who also had a child diagnosed with cancer. They described the parental experiences of obtaining both knowledge and comfort from forging these relationships. Parents described these relationships as a protective factor from the sense of isolation that often came with the diagnosis.

. . . it was really isolating. Because nobody could or would want to actually hear the problems you had. P02

When it happened . . . [we] connect[ed] with another family with the same diagnosis. We had a conversation with them to find out a bit more about the cancer and what kind of treatment . . . that we ourselves have some knowledge and something to start with. P04

[It] helped to link up with other parents, because you don't need to say a lot and they understand what you are thinking, the fears, it is different from talking to a relative. P05

Furthermore, parents also viewed the process of obtaining knowledge and practical support from nurses and local charity organisations as helpful.

I think the nurses are very supportive. They also taught us stuff, I think having listening ears do help. P05

[Name of charity] helped us a lot. So we know what the progress is. Before going for long chemo, they will inform us, so that's why we are well prepared. P03

Financial implications

Financial implications included the discussion of the financial consequences of the diagnosis, and contained two subthemes; financial strain and accessing funds. Financial strain described the financial impact of the treatment costs on the family, including difficulties maintaining employment and navigating health insurance claims.

Thankfully for us, we bought insurance before he was diagnosed. But we have met friends, other patients who were not so fortunate . . . And the financial strain can be quite hard for the family. P04

After your intensive treatment, usually you don't need to go and stay in hospital. A lot of check-ups are outpatient, and that means you cannot claim from insurance . . . we just have to fork out cash. So even like, we talked about hearing aids, a set is like \$7000. So that's like having seven iPads. P05

The subtheme of accessing funds included the parental descriptions of the difficulties in accessing their medical saving funds due to the current national policy. Parents discussed the need for a change in legislation to allow them to access funding to get treatment for their child's cancer late effects.

With side effects, then you supposed to see oncologists, then see the cardiologists, then the audiologists . . . so I have been seeing more and more doctors. I just want to use my own resources, but I need the government to open the doors for me. P05

. . . If your child has cancer, you will actually need more. But because of the limit you cannot cross certain amount, then you will have to go to your cash savings and maybe [name of charity] can work more closely with the authorities or the government to feedback that there is this group of people, who perhaps can be given a bit more flexibility on how they make use of their own Medisave savings. P04

Discussion

This pilot study sought to explore the experiences of Singaporean parents of childhood cancer survivors. The results of this study revealed three main themes of intrapersonal impact, interpersonal connectedness, and financial implications. Overall, the current results were consistent with those reported in western research⁶ and Asian studies.¹⁷ Despite cultural differences in quality of life between Singaporean caregivers and those in western countries,⁸ the broader constructs of emotional and interpersonal experiences among parents of children with cancer appear universal across cultures.⁶ However, the processes by which parents go through these experiences may differ in terms of the way they perceive, react and cope with their child's cancer.⁷

Intra and interpersonal needs as universal experiences

Consistent with the existing cancer literature, common universal experiences derived from this pilot study are the intrapersonal impact (i.e. emotional factors), and the need for interpersonal connectedness among parents of children diagnosed with cancer. Following the cancer diagnosis, parents reported experiencing significant emotional distress.^{6,11,17-20} In the current study, parents reported disrupted sleep quality, especially in the initial period of diagnosis, trauma and ongoing distress from caring for their child with cancer. As the child progresses to survivorship, parents continue to report uncertainty around their child's health status. This uncertainty included the fear of physiological and cognitive late effects, and the risk of cancer relapse. Such parental emotional experiences are also reported in western²⁰ and Asian studies.¹⁷ Furthermore, parents from our study reported the need to have positive thinking and hope regardless of the child's prognosis. In particular, parents also maintained hope through the survivor experiences of other parents who are also caring for a child with cancer. Interestingly, hope is commonly reported in western^{6,20} and Asian studies,^{17,18} suggesting that maintaining hope is an indispensable coping strategy for parents of children with cancer.

Another universal factor is the interpersonal experiences. Parents in the current study highlighted feelings of isolation, and the need for interpersonal connectedness with others. Parents reported being emotionally validated through their

interactions with other parents of children with cancer. The sense of isolation and emotional validation by other parents with similar experiences were consistent with those reported by Asian studies^{17,18,21} and those in western cultures.^{20,22} In general, parents who are caring for their children with cancer experienced challenges in their interpersonal relationships with their family members and friends.

Cultural differences in psychosocial help-seeking behaviours

Although the broader emotional and interpersonal experiences were likely to be universal, there are aspects unique to Asian cultures, which influence how Asian parents perceive, react and cope with their child's cancer. For instance, Kim et al.¹⁷ highlighted the cultural need for Korean parents in general to prevent being judged negatively by others due to cancer, termed as 'face-saving' (p. 3). Hence, Korean mothers preferred not to disclose information about their child's cancer and their own coping to others outside the family, such as friends and healthcare professionals.¹⁷ This cultural concept could be due to influences from Confucian values (refer to Hwang,²³ for a comprehensive discussion on Confucianism). Hwang²³ defined the dynamic contrasting relationship between the two aspects of 'face' in Confucianism, in which an individual strived constantly to maintain a balance between 'preserving loss' and 'enhancing one's face'. In the context of illness, the choice of revelation to others is dependent on the individual's perception of whether the illness is likely to disrupt that perceived balance of face.^{23,24} As parents tended to experience self-blame for 'causing' their children's cancer,²⁵ there may be a reluctance to reveal such information to others, to avoid the risk of negative evaluation (e.g. bad parents) or losing face. The concept of face-saving can also be found in other Asian cultures (e.g. Japan), although to varying degrees,²⁶ and dependent on individual differences and situational context (see studies).^{23,24} Conversely, individuals in western cultures preferred to obtain support from healthcare professionals than their friends.^{20,22}

Interestingly, the participants in the current study appeared to respond quite differently to other Asian cultures.¹⁷ In particular, parents found it difficult to seek the understanding of their child's cancer from individuals with whom they had a prior relationship (e.g. relatives and friends), but they were receptive towards receiving emotional support from healthcare professionals (e.g. nurses). In other words, Singaporean parents in our study appeared to respond to their need for social and emotional support more similarly to western than Asian cultures. Such findings differed from what was found by Ow¹¹ two decades ago, in which Singaporean parents preferred receiving support from friends than healthcare professionals. Albeit speculative, the differences between the current study and the findings reported by Ow may be due to the impact of globalisation in the past decades, particularly towards western acculturation,²⁷ and may suggest a possible shift in the extent of influence in Confucian values; although more studies would be required to explore this proposition. Nevertheless, some difficulties in communicating to others about the child's cancer were commonly reported by parents regardless of cultural differences.^{11,17,20,22}

Limitation in accessing funds: concerns raised by Singaporean parents

Although financial stress is commonly experienced by parents of children with cancer,^{6,17-19,22} the limitation in accessing government savings funds is an experience specific to Singaporean parents. According to the current government policy in Singapore,²⁸ citizens and permanent residents contributed a portion of their monthly salaries to an individual savings fund managed by the government. These savings funds were segmented into various categories for individual uses, such as healthcare, housing and education. There are safeguards in place for the use of such funds (e.g. type of uses and amount to be capped), to ensure that sufficient funds are available as the individual ages (e.g. healthcare and retirement uses). Although government subsidies and financial support schemes exist, parents in this study reported challenges in accessing the savings funds that partly contributed to their financial constraint. Some parents wondered if there could be some flexibility in the criteria for using the savings funds to ease their financial burden. There is a need to highlight that the purpose of the current study is not to evaluate the current Singapore policy regarding individual medical savings funds, but rather to identify the challenges that parents of children with cancer reportedly experienced in Singapore.

Clinical implications

Taking the findings of this pilot study in the context of the existing literature, cultural differences in Singapore are unlikely to become barriers to psychosocial interventions, especially those experiences that are universal (e.g. emotional distress, sense of isolation). However, the knowledge of cultural differences could assist clinicians in providing psychosocial interventions that are framed in the context most relevant and easily acceptable to parents from various cultural backgrounds. Importantly, cultural differences, when acknowledged and adapted in psychosocial interventions, would allow clinicians to support parents effectively, bypassing the need for trial and error, especially in determining the factors that are most important to parents of children with cancer. For example, Ow¹¹ identified that Singaporean parents placed more emphasis on their own emotional needs (e.g. distress and grief) over other needs (e.g. financial, information about cancer, family relationships) in the initial phase of receiving their child's diagnosis and up to 6 months. The results of Ow,¹¹ however, differed from other minority cultures in the United States, where parents emphasised information need (e.g. dietary and late effects), as the most important following a child's cancer diagnosis.²² Extrapolating from the findings of Ow,¹¹ when working with Singaporean parents, clinicians could focus on emotional needs, prior to addressing parents' need for information and support for family relationships. Moreover, the current study suggested that Singaporean parents are likely to be receptive to receiving psychosocial support from healthcare professionals. Nevertheless, cultural awareness does not preclude clinicians from exploring and responding to individual needs, which may differ from cultural expectations (i.e. individual differences).⁷

Limitations/future directions

There are some limitations in this pilot study, which affects the generalisability of the findings. First, due to our sampling approach, we were unable to sample from a broad range of demographics (e.g. ethnicity, socioeconomic status, cancer type, etc.). Second, our sample size is limited and included mostly mothers. Hence, future studies with a larger sample size would be needed to validate the current findings, particularly on the cultural influences of face-saving and psychosocial help-seeking behaviours in Singapore. Furthermore, future studies could also explore the experiences of children with cancer, including their fathers and siblings to understand their psychosocial needs. Third, similar to other studies,^{17,19} this study explored the retrospective parental experience of having a child with cancer, which may be different from prospective experiences, and thus may contain some level of recall bias. Nevertheless, the existing literature suggests that both prospective^{11,21} and retrospective studies^{17,19} on parental experiences revealed consistent findings that significant parental emotional distress was reported, especially in the early stages of receiving the child's cancer diagnosis.

Notwithstanding the limitations, this study adds to the existing limited research on the experiences of Singaporean parents with children who are cancer survivors (cf. Ow).¹¹ In particular, the current findings supported the need for parental emotional support at the early stages of the child's cancer.¹¹ Such findings are also consistent with international studies.^{6,19} Although further research is required, the current finding that Singaporean parents are receptive towards receiving emotional support from healthcare professionals is encouraging. The findings indicated a need for an early and holistic parental support programme to address intrapersonal, interpersonal and financial needs.

Conclusion

The psychosocial needs of parents caring for children with cancer is an important area of research and clinical focus. Overall, the themes identified in this pilot study revealed some universal experiences among Singaporean parents of children with cancer and those reported in the western and other Asian cultures. The current findings added to the limited research on the psychosocial experiences of Singaporean parents, such as cultural differences, financial strain and concerns within the Singaporean context. This pilot study highlighted the need for ongoing research and the development of an early and holistic psychosocial support programme for parents of children diagnosed with cancer in Singapore.

Acknowledgements

The authors would like to thank the funders for their financial contribution towards this research project. In addition, the authors would also like to extend their sincere appreciation to the parents for their time and participation in contributing to the understanding of their experiences in caring for children with cancer.

Authors' contributions

BT participated in the analysis and further refining of the themes; researched the literature, interpreted the themes in the context of

the literature and wrote the first draft of the manuscript. AC designed this study, and she was involved in the protocol development, gaining ethical approval, patient recruitment, facilitating the focus group, transcribing the audio-recording, analysing the themes and participating in the revision of this manuscript. LT co-facilitated the focus group, assisted in the thematic analysis, reviewed and provided feedback on the manuscript draft. JT and MYC reviewed the final themes and subthemes, manuscript draft and provided feedback. All authors approved the final version of the manuscript.

Availability of data and materials

Data sharing is not applicable for this study as the participants' verbatim comments were reported in the results section.

Trial registration (where applicable)

Not applicable.

Ethical approval

Ethical approval was obtained from SingHealth Centralised Institution Review Board (CIRB, reference number 2017/2873).

Informed consent

Written informed consent was obtained from the patient(s) for their anonymised information to be published in this article.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Children's Cancer Foundation (Singapore) with KK Women's and Children's Hospital Health Endowment Fund, and in partnership with SingHealth Duke-NUS Paediatrics Academic Clinical Programme, under grant (number 02/FY2016/EX/01-A57). This study forms part of a larger research project exploring late effects and the psychosocial impact of childhood cancer in Singapore.

ORCID iD

Beron Wei Zhong Tan  <https://orcid.org/0000-0002-8140-2540>

References

1. National Registry of Diseases Office, Singapore. *Singapore cancer registry 50th anniversary monograph (1968–2017)*. <https://www.nrdo.gov.sg/publications/cancer> (2019, accessed 23 April 2020).
2. Gilliam MB and Schwebel DC. Physical activity in child and adolescent cancer survivors: a review. *Health Psychol Rev* 2013; 7: 92–110.
3. Walsh KS, Noll RB, Annett RD, et al. Standard of care for neuropsychological monitoring in pediatric neuro-oncology: lessons from the children's oncology group (COG). *Pediatr Blood Cancer* 2016; 63: 191–195.
4. Thorsteinsson T, Helms AS, Adamsen L, et al. Study protocol: rehabilitation including social and physical activity and education in children and teenagers with cancer (RESPECT). *BMC Cancer* 2013; 13: 1–7.
5. Klassen A, Raina P, Reineking S, et al. Developing a literature base to understand the caregiving experience of parents of children with cancer: a systematic review of factors related to

- parental health and well-being. *J Community Support Oncol* 2007; 15: 807–818.
6. Gibbins J, Steinhardt K and Beinart H. A systematic review of qualitative studies exploring the experience of parents whose child is diagnosed and treated for cancer. *J Pediatr Oncol Nurs* 2012; 29: 253–271.
 7. Gray WN, Szulcowski LJ, Regan SM, et al. Cultural influences in pediatric cancer: from diagnosis to cure/end of life. *J Pediatr Oncol Nurs* 2014; 31: 252–271.
 8. Lim HA, Tan JY, Chua J, et al. Quality of life of family caregivers of cancer patients in Singapore and globally. *Singapore Med J* 2017; 58: 258–261.
 9. Aung L, Saw SM, Chan MY, et al. The hidden impact of childhood cancer on the family: a multi-institutional study from Singapore. *Ann Acad Med Singapore* 2012; 41: 170–175.
 10. Pek JH, Chan Y-H, Yeoh AE, et al. Health-related quality of life in children with cancer undergoing treatment: a first look at the Singapore experience. *Ann Acad Med Singapore* 2010; 39: 43–48.
 11. Ow R. Burden of care and childhood cancer: experiences of parents in an Asian context. *Health Soc Work* 2003; 28: 232–240.
 12. Ho AHY, Dutta O, Tan-Ho G, et al. Thematic analysis of spousal interaction patterns among Asian parents of children with chronic life-threatening illness. *BMJ Open* 2019; 9: e032582.
 13. Dutta O, Tan-Ho G, Choo PY, et al. Trauma to transformation: the lived experience of bereaved parents of children with chronic life-threatening illness in Singapore. *BMC Palliat Care* 2020; 19: 1–15.
 14. Dutta O, Tan-Ho G, Choo PY, et al. Lived experience of a child's chronic illness and death: a qualitative systematic review of the parental bereavement trajectory. *Death Stud* 2019; 43: 547–561.
 15. Braun V and Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3: 77–101.
 16. Archibald MM. Investigator triangulation: a collaborative strategy with potential for mixed methods research. *J Mix Methods Res* 2016; 10: 228–250.
 17. Kim MA, Yi J, Sang J, et al. Experiences of Korean mothers of children with cancer: a photovoice study. *J Psychosoc Oncol* 2017; 35: 128–147.
 18. Aung KT, Muda SM and Jamaludin K. Oncology nursing: a preliminary study on experiences of mothers of childhood cancer survivors in Kuantan, Pahang, Malaysia. *Int J Health Sci Res* 2016; 6: 306–316.
 19. Christen S, Mader L, Baenziger J, et al. "I wish someone had once asked me how I'm doing": disadvantages and support needs faced by parents of long-term childhood cancer survivors. *Pediatr Blood Cancer* 2019; 66: e27767.
 20. McCaffrey CN. Major stressors and their effects on the well-being of children with cancer. *J Pediatr Nurs* 2006; 21: 59–66.
 21. Wong MYF and Chan SWC. The qualitative experience of Chinese parents with children diagnosed of cancer. *J Clin Nurs* 2006; 15: 710–717.
 22. Moody K, Mannix MM, Furnari N, et al. Psychosocial needs of ethnic minority, inner-city, pediatric cancer patients. *Support Care Cancer* 2011; 19: 1403–1410.
 23. Hwang K-K. Foundations of Chinese psychology: Confucian social relations. New York: Springer, 2012, p. 378.
 24. Han K-H. The feeling of "face" in Confucian society: from a perspective of psychosocial equilibrium. *Front Psychol* 2016; 7: 1–9.
 25. Yeh C-H. Dynamic coping behaviors and process of parental response to child's cancer. *Appl Nurs Res* 2003; 16: 245–255.
 26. Zhang YB, Lin M-C, Nonaka A, et al. Harmony, hierarchy and conservatism: a cross-cultural comparison of Confucian values in China, Korea, Japan, and Taiwan. *Commun Res Rep* 2005; 22: 107–115.
 27. Sidhu R, Ho K-C and Yeoh B. Emerging education hubs: the case of Singapore. *High Educ* 2011; 61: 23–40.
 28. Central Provident Fund Board Singapore. *Central provident fund (CPF) schemes*. <https://www.cpf.gov.sg/Members/Schemes> (2019, accessed 12 August 2019). 7