



Evaluating the experiences of parents of children with cancer engaging in a mobile device-based resilience training programme: a qualitative study

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Abstract

Purpose A mobile device-based resilience training programme has been found to improve psychological well-being in parents of children with cancer. However, the essential elements underlying the programme's efficacy and the factors that affect parents' advocacy of the online resilience training remain unknown. This study explored the lived experience of engaging in a mobile device-based resilience training programme in parents of children with cancer.

Methods A descriptive phenomenological approach was used. Parents of children with cancer who had received the mobile device-based resilience training in a previous randomised controlled trial were selected to attend one-to-one semi-structured interviews. All interviews were audio-recorded. Data were analysed using Colaizzi's descriptive phenomenological method.

Results Twenty-one parents, comprising 15 mothers and 6 fathers, of children with cancer participated in the interview. The two following themes were identified: perceptions about the training (be beneficial for psychological well-being, be beneficial for parent–child communication and be beneficial for coping) and evaluation of the training (increased knowledge and skills, be satisfied with the intervention form and content, challenges to adhere to the programme and recommendations for future interventions).

Conclusion This study explored which features of a mobile device-based resilience training programme improved the psychological well-being of parents of children with cancer. Its findings highlight the importance of providing a resilience training programme that is based on the parents' intervention form preferences and their mental health needs.

Trial registration NCT04038242, registered 17 July 2019.

Keywords Cancer · Children · Experience · Mobile health · Parents · Well-being

Introduction

Caring for children with cancer can be a stressful experience for parents and may have negative impacts on their psychological well-being. A recent meta-analysis of 58 studies on psychological distress, which included 9262 parents

of children with cancer across 14 countries, revealed that the prevalence of depression, anxiety and post-traumatic stress disorder were 28%, 21% and 26%, respectively [1]. A cross-sectional study on Chinese parents of children with cancer found that 75.1% of parents reported depressive symptoms [2]. The relatively high rate of depressive symptoms in parents of children with cancer indicates that the current interventions for promoting parental psychological well-being, such as problem-oriented psychological therapies, leave significant room for improvement, such as intervention flexibility and accessibility [3].

As an important strategy to promote psychological well-being, resilience training programmes target individuals who experience significant levels of stress and is an important strategy to promote psychological well-being and mitigate the negative effects of stress [4]. Instead of simply treating psychological problems, resilience training programmes

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aim to equip individuals with the resources and skills necessary to navigate adversity and thrive in challenging environments [5]. Resilience training has flourished in the last decade and has been widely implemented in education institutions and workplace; this training has been reported to improve the well-being of students and employees, as well as their studies and work performance [6]. Few studies have explored the application of a resilience training programme in parents of children with cancer, and the evidence of its effectiveness needs to be further enhanced [7]. Research on mobile health among caregivers of children with cancer has recently gained momentum [8]. Mobile health intervention was reported to be beneficial in increasing informational supports and decreasing caregiving burden for parents of children with cancer [9]. The use of mobile apps to deliver resilience training is more flexible than face-to-face interventions, as healthcare professionals can give the participants remote support and feedback to promote their psychological well-being via mobile apps, particularly during a pandemic, when the delivery of face-to-face health care interventions may not be feasible. Therefore, we developed a mobile device-based resilience training programme for parents of children with cancer and conducted a randomised controlled trial (RCT) to evaluate its ability to improve psychological well-being. According to the resilience framework [10], the internal resiliency factors—cognitive, emotional, spiritual, behavioural and physical factors—represent fundamental elements that are essential for effective coping and adapting well in the face of adversities. Thus, by cultivating the skills and resources to foster these internal resiliency factors, a resilience training programme could help parents adapt to their children's cancer and promote their psychological well-being.

The findings of our RCT showed that a mobile device-based resilience training programme enhanced resilience and reduced depressive symptoms in parents of children with cancer [11]. Nevertheless, this trial did not explore how parents apply learned skills to successfully address the psychological distress caused by their children's cancer. Moreover, it remains unclear whether the mode of online delivery in the mobile device-based resilience training programme affects the parental experience and compliance. Although research on mobile health among children with cancer and their caregivers has recently gained momentum, the development of applications to promote psychological well-being in parents of children with cancer is poorly understood [8]. One survey on the attitudes and preferences surrounding mobile health found that approximately a quarter of parents of children with cancer were not in favour of online psychological interventions, if offered [12]. The enablers and barriers to attending online psychological interventions in these parents are unclear. As far as we know, there have been no qualitative studies on the experiences of resilience training via a mobile

application in parents of children with cancer. Understanding the perceptions of parents is paramount in facilitating the sustainability of an effective mobile device-based resilience training programme that can foster resilience and promote psychological well-being in parents of children with cancer. Therefore, this study explored parents' lived experience of engaging in the mobile device-based resilience training programme. Specifically, we obtained the parents' perceptions in terms of the training process and effects.

Methods

Study design and participants

This qualitative study was conducted in three tertiary hospitals in mainland China and used a descriptive phenomenological approach to explore the experiences of parents of children with cancer in attending a mobile device-based resilience training programme. The participants were selected from a previous RCT [11] that evaluated the efficacy of a mobile device-based resilience training programme on the psychological well-being of primary caregivers, either fathers or mothers, of children (0–19 years) with cancer. Eligible parents of children with cancer who expressed their willingness to participate in an interview through a previous questionnaire were contacted by phone and invited to attend the one-on-one semi-structured interview. To capture a wide range of experiences of engaging in the mobile device-based resilience training programme, we invited parents with varied demographical backgrounds and psychological outcomes to participate in the interview; the psychological outcomes were measured after intervention in the RCT. Recruitment for the interviews continued until the research committee revealed that the collected data no longer yielded new information or allowed for further coding.

The mobile device-based resilience training programme

Fifty-two parents of children with cancer in the experimental group received an 8-week mobile device-based resilience training programme in the previous RCT. The intervention was delivered via a WeChat official account, which is similar to a Facebook page and includes tweet design and instant interaction communication functions [13]. We designed eight tweets that focused on resilience training and sent the tweets weekly. The tweets were displayed in the form of text and short videos of about 3 min. Participants were required to read the tweet sessions and complete the online assignments related to resilience skill training. Then, a psychological consultant gave participants feedback on their assignments via WeChat. A reminder of the assignment was

sent weekly to promote the participants' completion of the training.

Data collection

An interview guide was developed by the research committee, which comprised the head of a paediatric oncology department, two professors in the field of psycho-oncology, one senior research fellow and one research student trained in qualitative studies. Four main areas were mentioned in the interview guide, as follows: (1) overall feelings about and perceptions of the mobile device-based resilience training programme, (2) perceived changes following the programme, (3) perceived challenges in completing the training and (4) suggestions for improvements to the programme. Probing questions were also used, for example tell me more about that, what do you mean when you say xxx? The guide was pilot tested, and no change was made. Each interview lasted 20–30 min. All interviews were conducted face-to-face in private counselling rooms in the ward by the same interviewer and were audio-recorded with the participants' consent.

Data analysis

All audio-recorded interviews were transcribed verbatim and double-checked for accuracy. We organised the transcribed data using NVivo 11 software (2015; QSR International, Melbourne, Australia) [14], which were then analysed using Colaizzi's descriptive phenomenological method [15]. First, the researchers read the transcripts repeatedly to familiarise themselves with the data and get a general sense of the interview content. Significant statements directly relevant to the parents' experiences of engaging in the mobile device-based resilience training programme were identified and extracted from the transcripts. Second, the researchers formulated meanings from the statements, and then grouped all these formulated meanings into categories based on the similarity in the meanings, which formed a unique structure of clusters of subthemes. After that, groups of clusters of subthemes that reflect a particular vision issue were incorporated together to form a distinctive construct of theme. Third, the researchers integrated all of the findings into exhaustive descriptions, which were then condensed into short statements that reflected the essential structure of the phenomenon. Finally, the findings were returned to the participants to confirm whether the statements accurately captured their experiences.

Several strategies were applied to ensure the trustworthiness of the study's findings. First, to enhance credibility, two researchers independently analysed the qualitative data, and inconsistent codes and themes were discussed by the research committee. Second, to strengthen confirmability,

the triangulation method was adopted. The researchers were interviewed by an external expert before the investigation to identify any preconceptions that might prejudice interpretations of the data. Third, to improve transferability, we provided comprehensive descriptions of the phenomenon and related contextual information. Finally, to ensure dependability, we reported the research process in detail to enable reproduction of the study.

Ethical considerations

This study was approved by the Institutional Review Board of the University of Hong Kong/Hospital Authority Hong Kong West Cluster (UW 19–436). Written informed consent, which provided detailed information about the study's purpose and procedure, was obtained from all participants at the beginning of the study.

Results

Twenty-one participants completed the interview between May 2020 and August 2020, after the intervention. Most respondents were female (71.4%) and married (95.2%), with a mean age of 33.0 years (standard deviation [SD]=4.6 years). Their children had a mean age of 5.9 years (SD=3.5). Approximately two thirds of children had been diagnosed with haematology tumours, and the remaining one third with solid tumours. More than half of the children had been diagnosed with cancer more than 6 months prior to the time of completing this study. The characteristics of parents and their children are presented in Table 1.

Two themes were extracted from the parents' experiences of engaging in the mobile device-based resilience training programme, as follows: perceptions about the training (be beneficial for psychological well-being, be beneficial for parent–child communication and be beneficial for coping) and evaluation of the training (increased knowledge and skills, be satisfied with the intervention form and content, challenges to adhere to the programme and recommendations for future interventions). The themes, subthemes, short statements and examples of quotes from the interviews are shown in Table 2.

Theme 1: perceptions about the training

Subtheme 1: be beneficial for psychological well-being

Most participants reported that they could better regulate their own negative emotions after learning related skills in the programme. Some of them habitually read the programme's tweets when they experienced negative emotions, and the content or exercise included in the tweets, such as

Table 1 Characteristics of parents and children ($N=21$)

	<i>n</i> (%)
Parents characteristics	
Age of parents, mean (SD), years	33.0 (4.6)
Sex of parents	
Female	15 (71.4)
Male	6 (28.6)
Marital status	
Married	20 (95.2)
Divorced	1 (4.8)
Educational attainment	
Primary school	2 (9.5)
High school	10 (47.6)
College	9 (42.9)
Income (¥, CNY ^a)	
< 3000	8 (38.1)
3000~5000	7 (33.3)
> 5000	6 (28.6)
Children characteristics	
Age of children, mean (SD), years	5.9 (3.5)
Sex of children	
Female	6 (28.6)
Male	15 (71.4)
Type of cancer	
Haematology tumour	15 (71.4)
Solid tumour	6 (28.6)
Type of treatment	
Single therapy	15 (71.4)
Multiple therapies	6 (28.6)
Time since diagnosis (month)	
0~6	9 (42.9)
>6	12 (57.1)

^aCNY = China yuan, US\$ 1.00 = ¥ 7.02

meditation, helped participants take their mind off of the emotionally distressing situation.

Some participants showed improved skills in cognition reframing after taking part in the programme and were able to appropriately apply such skills during their daily life. They learned to think about situations from multiple perspectives and got rid of stubborn negative thoughts, especially in the face of family conflict. With positive cognition, the participants reported that they had a more open mind.

Subtheme 2: be beneficial for parent–child communication

Many participants were quite impressed with the parent–child communication skills training session of the programme. Most of them reported that they had learned how to communicate with their child when the child was emotional. They realised the importance of listening to their child's

inner thoughts and teaching them to express their feelings. Some participants reported that they could better understand their child and deal with their child's emotions after engaging in the programme.

Some participants realised that their ability to control their emotions was improved after acquiring relevant emotion management skills from the programme, such as attention shifting and expression suppression. They were aware of the negative effects of losing their temper in front of their child and tried to deal with the child's misbehaviours in a correct and reasonable way. For example, instead of shouting at their child, the parents left the scene to calm themselves down, then came back to educate the child with patience.

Subtheme 3: be beneficial for coping

Some participants perceived positive energy after engaging in the programme, which was considered to be what the parents of children with cancer needed to overcome adversity. They learned to find solutions to problems instead of complaining, such as seeking supports from others. A few participants reported that they were more confident to deal with their child's cancer after doing the three good things exercise to cultivate positive emotions and behaviours, in which the participants were asked to write down three things that go well for them that day and reflect on why they went well.

Theme 2: evaluation of the training

Subtheme 1: increased knowledge and skills

Many participants reported that they learned a lot after engaging in the mobile device-based resilience training programme, such as communication skills and knowledge about their child's mental health. They also reported that the skills and information included in the programme were useful. Compared with information found on the internet, the truth of which is difficult to gauge, the participants considered the programme to have provided correct information and skills.

Subtheme 2: be satisfied with the intervention form and content

Almost all participants were satisfied to complete the intervention using a WeChat official account, which was easy to access and user friendly. The online delivery of resilience training was considered convenient, without any time and place restrictions. Most participants reported that each tweet within a 10-min reading time was appropriate, and the training content was comprehensive. Nearly two thirds of the participants agreed that receiving the training once a week was appropriate, while a few participants suggested increasing the frequency to twice a week because they thought that the

Table 2 The themes, subthemes, short statements and examples of quotes from the interviews

Themes	Subthemes	Short statements	Examples of quotes
Theme 1: perceptions about the training	Subtheme 1: be beneficial for psychological well-being	Learn to regulate negative emotions, think about situations from multiple perspectives and get rid of stubborn negative thoughts	‘When I am in a bad mood, I just take a look at the tweets in the programme, then regulate (the emotions) as the tweets instruct, and my mood is better.’ <i>Parent 3, female, child aged 5 years</i> ‘After reading the tweets and doing the exercises, I find it easier to calm down. My mood does not fluctuate so much.’ <i>Parent 20, male, child aged 2 years</i>
	Subtheme 2: be beneficial for parent–child communication	Know how to communicate with the child in a correct way when he/she is emotional	‘When he (the child) gets emotional, we know how to communicate with him and calm his emotions, after the training.’ <i>Parent 11, male, child aged 5 years</i> ‘To understand him (the child), listen more to his own inner thought, that tweet is very well written, from how to understand children, and then to what we adults should do, how to communicate. I learned a lot.’ <i>Parent 13, female, child aged 8 years</i> ‘Sometimes my child did not listen to me, and I wanted to be angry. But when I thought about it, that it might be bad for my child, I treated him in another way, to express my love.’ <i>Parent 1, female, child aged 6 years</i>
	Subtheme 3: be beneficial for coping	More confident to deal with the child’s cancer	‘The exercise is useful. Now I believe I can deal with the issues related to my child’s cancer. I am more confident than before.’ <i>Parent 2, male, child aged 2 years</i> ‘I have better mindset than before, after reading the tweets, I felt I can treat my child’s disease with equanimity.’ <i>Parent 15, male, child aged 6 years</i>

Table 2 (continued)

Themes	Subthemes	Short statements	Examples of quotes
Theme 2: evaluation of the training	Subtheme 1: increased knowledge and skills	The programme provided useful information and skills	‘The platform is good, very useful. You know, there is too much information on the internet, and false information may mislead you. This platform provided clear and reliable information.’ <i>Parent 2, male, child aged 2 years</i> ‘We can learn more about our child’s mental problems through the platform. Anyway, it is helpful for us. Through the platform, we can gain a lot of knowledge.’ <i>Parent 1, female, child aged 6 years</i>
	Subtheme 2: be satisfied with the intervention form and content	The online delivery of training was convenient and the training content was comprehensive	‘WeChat is now widely used as a communication tool. I use WeChat every day, so I pay attention to this platform every day. It’s good.’ <i>Parent 7, male, child aged 2 years</i> ‘The training content presented in the form of video was clear, with this form I can learn the training methods better.’ <i>Parent 7, male, child aged 2 years</i>
	Subtheme 3: challenges to adhere to the programme	Busy work and heavy care burden were factors hindering adherence to training	‘We don’t think about ourselves, and only care about our child’s health, how to make our child happy. We put hundred percent of our heart into our child.’ <i>Parent 12, female, child aged 6 years</i> ‘I did half of it, and now that my child’s treatment is over, there is no more need.’ <i>Parent 8, female, child aged 13 years</i> ‘I did the training during treatment in the hospital, but I had no time to do it at home during the intermittent period of treatment.’ <i>Parent 20, male, child aged 2 years</i>
	Subtheme 4: recommendations for future interventions	It was suggested to add more diet-related information in future interventions and create a similar training programme for the child with cancer	‘Children don’t eat much after several chemotherapies. This is a big problem for parents. I hope to learn more about the child’s diet in future programmes.’ <i>Parent 13, female, child aged 8 years</i> ‘The child’s temper has changed. We need to care about their mental health. We need a similar programme to provide psychological guidance for our children.’ <i>Parent 16, female, child aged 12 years</i>

trained content could be digested in approximately 3 days. In addition, the combined form of video and text for the training content was supported by the majority of participants, while different opinions concerning the amount of video and text content in each tweet were reported. Some participants were in favour of shorter videos with refined training content, and a few participants thought that including more text could make the training content clearer.

Subtheme 3: challenges to adhere to the programme

Some participants reported that they put all attention onto their child and had no extra time to care about their own health. A few reported spending almost all of their time taking care of their child and sometimes forgetting to engage in the programme. They focused on their child's hospital examination results and symptoms every day, and only read the programme's tweets when they were in a bad or unhappy mood.

Two participants who only completed half of the training reported that they did not require further information or had no mental health needs. One participant stopped participating in the programme after her child had finished intensive hospital treatment. This participant indicated that parents of newly diagnosed children with cancer might benefit more from the programme. Another participant discontinued her participation because she considered herself to be mentally healthy and had no mental health needs.

Some participants were too busy working to complete the training. They usually read the tweets and did the programme exercise when taking care of their child in hospitals. During the intermittent period of chemotherapy, some participants interrupted the training because of being busy at work. Another objective obstacle to completing the training was that participants received too many other messages in WeChat, which sometimes covered up the training tweets and caused them to miss tweets. In addition, a few participants reported that their mobile phone was often held by their child to play games, and so it was not easy for them to access their phone to complete the whole exercise.

Subtheme 4: recommendations for future interventions

Many participants requested diet-related information for their child in future programmes. They considered their child's diet as a priority and a problematic issue. Information regarding how to increase their child's appetite and guarantee their nutrition was strongly recommended for inclusion in a future programme. Several participants also expressed their needs for information about care at home after the child's treatment.

Some participants suggested creating a similar resilience training programme for their children with cancer.

In particular, participants with a teenage child realised the psychological changes in their child, but had no efficient way to improve their child's mental condition. The participants recognised that the mobile device-based resilience training programme was effective in improving their psychological well-being and thought that some of the content would also be suitable for psychological guidance for their children.

Discussion

This qualitative study provides an in-depth understanding of parents' lived experiences of engaging in a mobile device-based resilience training programme. Overall, the parents of children with cancer were satisfied with the training programme and reported an improved psychological well-being. They valued the experience of the resilience training programme and described how they had applied skills acquired through the programme to address psychological distress caused by their child's cancer. Some parents reported that they could sometimes deal with their negative emotions by practicing the programme's meditation exercise. Extant studies on parents of children with chronic illness have also reported that mindfulness practice can foster psychological flexibility and alleviate psychological distress [16]. Some parents felt positive energy after doing the exercise of recording three good things. Evidence has shown that optimism is positively associated with resilience and mediates the relationship between resilience and psychological well-being [17]. Given that the practice of recording three good things is highly effective in cultivating optimism [18], resilience training that incorporates this exercise can therefore foster positive emotions and resilience in the parents of children with cancer. In addition, the parents who were impressed with the cognition reframing training reported that they had learned to think about the more positive aspects when encountering problems. In this way, a positive outlook helped them to calmly solve the problem step by step. Cognition restructuring strategies have been reported to have sustainable efficacy in improving psychological well-being in parents of children with cancer [19]. Moreover, some parents reported that acquiring better parent-child communication skills through the programme helped them to more effectively cope with and adapt to their child's cancer, especially the strategies that concerned dealing with their child's negative emotions. Parents' psychological well-being is strongly associated with a child's emotions, and many parents expressed helplessness in the face of their child's negative emotions caused by cancer [20]. In the mobile device-based resilience training programme, parents learned to help their child identify and vent emotions using appropriate methods. The improved emotions in children might also have a positive effect on parents' psychological well-being [21].

During the COVID-19 pandemic, online training for parents is more accessible and has been increasingly applied in practice [22]. In our study, the majority of parents were highly satisfied with the mode of online delivery in the mobile device-based resilience training programme. Consistent with parents' experience of engaging in other online supportive care interventions [23], online training was considered convenient and a source of useful information. Some parents appreciated that the online nature of the programme meant that training content could be saved, which allowed them to review the learned skills at any time. Although most parents were happy with the training mode via WeChat, there were some disagreements in the appropriate amount of video and text that should be contained in each tweet. Evidence has shown that video-based interventions are usually more effective in changing subjects' behaviours than text information [24, 25]. However, the effects of video versus text on improving the well-being of parents of children with cancer are unknown in the context of resilience training programme. Future research could explore whether the resilience training content presented in a video format is more effective than in a text format.

The findings revealed that there were some obstacles to completing the mobile device-based resilience training programme in the parents of children with cancer, including parents focusing all their attention on their child's condition, changing mental health needs and other objective reasons. One parent discontinued the resilience training as she no longer had mental health needs after the child's intensive hospital treatment. Extant evidence has shown that the psychological distress of parents is most severe when their child is newly diagnosed with cancer and may gradually ease at 3 months after the diagnosis [26]. The psychosocial standard of care for parents of children with cancer also highlights that healthcare professionals should give an early and ongoing assessment of the parents' mental health needs and implement appropriate interventions to optimise parent well-being [27]. Therefore, the mobile device-based resilience training programme should be implemented at the early stage, when parents first learn of their child's cancer diagnosis and express mental health needs. Easily obscured messages in WeChat was one objective reason for failing to read the tweets and complete the training. To solve this objective barrier in future programmes, an additional setting that allows programme information to be viewed as a priority could ensure that the training tweet always appears at the top of the WeChat information list.

Two major recommendations for future programmes were proposed by the parents. One was to provide more information about caring for a child with cancer, particularly the child's nutrition. Chemotherapy-induced nausea and vomiting are common symptoms in children with cancer and can lead to poor appetite and malnutrition [28]. Given

that a child's poor condition has a direct effect on parents' well-being [29], a combination of supportive care intervention and resilience training could be considered in future programmes. Another recommendation was to develop a similar mobile device-based resilience training programme for children with cancer. Although many applications have been designed to monitor symptoms or encourage appropriate physical exercise in children with cancer [30, 31], little attention has been paid to online resilience training. Separate interfaces with specific resilience training content for parents and children could be designed in future applications.

There were some limitations in this study. First, the parents of children with cancer selected for the interview were recruited from a previous RCT conducted in mainland China, and only 52 parents of children with cancer received the mobile device-based resilience training, so the findings may not fully reflect the experiences of all Chinese parents of children with cancer. Second, given that culture may affect parents' experience in engaging in the programme, the findings of this study should be interpreted with caution.

Implications for practice

This qualitative study provides insights into how the mobile device-based resilience training programme promoted the psychological well-being of parents of children with cancer. Our findings enhance the transferability of the results of the previous RCT to other settings by complementing information on parents' participation experiences and relative context information. Most importantly, our study identified the crucial factors influencing parents' adherence and engagement in the programme. Such findings may help healthcare professionals to develop care models with improved designs and better quality. For example, the parents reported different preferences for the amount of video or text content of tweets in the delivery of information, and so healthcare professionals could develop and provide different forms of tweets according to these preferences. In addition, providing the mobile device-based resilience training programme when the parents of children with cancer have a psychological need can enhance the intervention adherence and may maximise the intervention effects. Finally, we highly recommend that this programme is integrated into existing supportive care for parents of children with cancer in the clinic to improve their psychological well-being.

Conclusion

This study addressed a gap in the literature by exploring how a mobile device-based resilience training programme improves the psychological well-being of parents of children with cancer, and how the mode of online delivery impacts

the parents' experience. To facilitate parents' engagement in the programme and optimise their psychological well-being, resilience training should be provided according to the parents' preferred delivery forms of video or text when they have mental health needs. Moreover, the findings suggest that the parents who have improved communication with their children are more confident in dealing with their children's emotions. Since parents are the most important people to support their children, they should be recommended to receive a resilience training programme to manage their own emotions and improve communication skills while providing psychological support for children with cancer.

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Author contribution All authors contributed to the study conception and design. The first draft of the manuscript was written by Yuanhui Luo and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Data availability The data that support the findings of this study are available on request from the corresponding author.

Code availability N/A.

Declarations

Ethics approval This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Institutional Review Board of the Hospital Authority Hong Kong West Cluster/the University of Hong Kong (UW 19–436).

Consent to participate Informed consent was obtained from all individual participants included in the study.

Consent for publication Participants signed informed consent regarding publishing their data.

Competing interests The authors declare no competing interests.

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