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BE BLESSED TO RESPIRE: A QUALITATIVE APPROACH TO UNDERSTANDING POST-TRAUMATIC GROWTH AMONG COVID-19 SURVIVORS IN MALAYSIA

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ABSTRACT

The COVID-19 pandemic is a global health crisis that led to concerning hospital admission and death rate. Hospitalised COVID-19 survivors faced multiple stressors and tremendous psychological distress throughout their infection, hospitalisation and recovery journey. Despite facing adversity, discharged COVID-19 patients were found to breakthrough and achieve Post-Traumatic Growth (PTG) while demonstrating the tendency to flourish from the negative experience. By adopting a basic interpretive qualitative research design, this study obtained a comprehensive understanding about the hospitalised experience of COVID-19 survivors. The employment of the Post-Traumatic Growth Inventory (PTGI) as a screening criterion among participants who achieved medium to very high PTG has validated the research findings after surviving through Stages 4 and 5 COVID-19 infection, hospitalisation and at least 3 months post-discharge. Thematic analysis has revealed components that contributed to participants' PTG – the presence of stressors, perceived distress, adaptive coping strategies, resilience, social support and inner strengths. Positive changes that emerged after the experience were reflected in 6 PTG themes – increased pro-health awareness and actions, sense of purpose, positive life view, more agreeableness, change in life priorities and *Carpe Diem*. Research findings also provided insights about the subjective hospitalised experience and growth journey through the eyes of COVID-19 survivors. Recommendations in this study can be a pivotal reference for community stakeholders to reinforce policies that go beyond alleviating negative impacts of the pandemic to achieve pragmatic outcomes through shaping a supportive environment that aids recovery and promoting growth among survivors of COVID-19 and any possible future health crisis.

Keywords: Post-Traumatic Growth, positive changes, COVID-19 survivors, hospitalisation, pandemic

Introduction

Overview

Since the commencement of various Movement Control Orders starting on March 18, 2020, Malaysia has been stricken by the COVID-19 pandemic for more than 36 months (COVIDNOW, 2021). While the admission and fatality rate has gradually decreased following the nation-wide vaccination programme (Hashim et al., 2021; Jayasundara et al., 2021), survivors of severe COVID-19 infection faced enormous psychological distress following their near-death experiences (Moradi et al., 2020; Vlake et al., 2021). Being admitted into isolated wards, the hospitalised experience tended to revolve around the intense fear of death and negative emotions that were amplified by associated stigma (Sahoo et al., 2020; Son et al., 2021). Attributing Coronavirus infection to personal negligence and ignorance, COVID-19 infected individuals and survivors were labelled as disease carriers (Moradi

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et al., 2020; Yuan et al., 2021) as well as being personally responsible for the viral contraction and spread (Bhanot et al., 2020; Economou; 2021). Despite these adverse psychosocial circumstances, recent studies in China have identified significant levels of Post-Traumatic Growth (PTG) in discharged COVID-19 patients (Sun et al., 2021; Yan et al., 2021). Complementing with a study from Wu et al. (2021) that examined the quality of life of discharged COVID-19 patients, research findings suggested that positive growth and changes could be derived from survivors' hospitalisation experiences although intense mental distress was found in the initial rehabilitative stage. As such, this research sought to delve into the journey of recovery and growth among COVID-19 survivors.

Definition of Terms

Post-Traumatic Growth (PTG) is the positive psychological transformation that follows a highly challenging or stressful life encounter, where one is able to look beyond the struggle and find the purpose of pain in the aftermath of a trauma (Tedeschi & Calhoun, 2004). This positive growth may involve finding benefit or making meaning out of the adverse life event, in which one's beliefs and assumptions were challenged by the traumatic stressor (Wade et al., 2017). Tedeschi & Calhoun (1996) identified the positive changes of PTG to be reflected in one or more of five areas including enhanced personal strengths, embracing of new possibilities, strengthened interpersonal relationship, increased appreciation of life and spiritual change. As such, PTG is prevalent among survivors of terminal illnesses (Liu et al., 2021), traumas (Wu et al., 2019), disasters (Salawali et al., 2020) and other negative life events.

Problem Statement

While numerous research addressed the psychological distress experienced by COVID-19-infected individuals (Cai et al., 2020; Moradi et al., 2020; Scarpina et al., 2021), limited studies have explored positive aspects derived from such a critical life experience. In fact, pandemic driven PTG has been demonstrated in different populations despite the prolonged global crisis, such as among healthcare workers (Peng et al., 2021; Zhang et al., 2021), military veterans (Na et al., 2021; Pietrzak et al., 2021), college students (Chi et al., 2020; Yildiz, 2021) and the general population (Lau et al., 2021; Vazquez et al., 2021). However, only several studies highlighted the role and significance of PTG in recovery and growth of COVID-19 survivors (Sun et al., 2021; Yan et al., 2021). Therefore, more studies are needed to gain in-depth understanding on the underlying psychological mechanisms of COVID-19 survivors from infection to hospitalisation and eventually outliving such a challenging health crisis.

Research Objective

Main Objective: To obtain a comprehensive understanding on Post-Traumatic Growth derived from hospitalised experience among COVID-19 survivors in Malaysia.

Sub-Objective:

1. To explore components that facilitate the process of recovery and growth among COVID-19 survivors.
2. To identify themes of Post-Traumatic Growth among COVID-19 survivors.

Research Questions:

RQ 1: What are the components that facilitate the process of recovery and growth among COVID-19 survivors?

RQ2: What are the themes of Post-Traumatic Growth among COVID-19 survivors?

Literature Review

Prevalence

A systematic review by Wu et al. (2019) indicated the prevalence of moderate-to-high PTG after experiencing a traumatic event. Early studies from Siegel & Schrimshaw (2000) found that 83% of women with HIV/AIDS reported at least one positive change in life despite experiencing intense distress due to the illness. A subsequent study suggested the buffering role of benefit-finding in promoting psychological adjustments

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among HIV/AIDS survivors (Siegel & Schrimshaw, 2007). In fact, studies of terminal illness survivors have mostly found prominent levels of benefit-finding and PTG (Lassmann et al., 2021; Liu et al., 2021; Sim et al., 2015). Similar findings of PTG were also demonstrated in survivors of natural disasters (Bernstein & Pfefferbaum, 2018; Salawali et al., 2020), terrorist attacks (Nadeem et al., 2019; Pollari et al., 2020) and criminal assaults (Elderton et al., 2017; Kirkner & Ullman, 2020). Moreover, individuals with exposure towards SARS (Cheng et al., 2006) and MERS (Hyun et al., 2021) also experienced PTG after encountering the public health crises. Correspondingly, significant PTG levels were also found among patients and survivors of the present COVID-19 pandemic (Sun et al., 2021; Yan et al., 2021). This suggests that PTG may be prevalent among individuals who experienced traumatic stressors in life.

Components That Facilitate Post-Traumatic Growth

Stressors

Stressors are generally defined as any physical or psychological event that imposed a sense of threat or distress towards an individual (Holahan et al., 2017). This includes significant life events, major crises and trauma that will invoke stress responses for coping (Murison, 2016). Given that the perception of stressors can be subjective (Boals, 2018; Weinberg & Gil, 2016), stress exposure accompanied by a traumatic incident is closely associated with one's perceived level of distress. Arpawong et al. (2016) found stressors and perceived level of distress as predictors of PTG among high-risk emerging adults. Studies also demonstrated the association between perceived stress and PTG (Li et al., 2021), where moderate levels of perceived general stress were correlated with greatest PTG levels (Coroiu et al., 2016). According to El-Gabalawy et al. (2020), the emergence of PTG differs across event severity, with greater PTG experienced by individuals with trauma exposure as compared to usual stressors. Research findings also highlighted that the greatest PTG level was associated with perceived moderate chronicity of distress and current emotional distress due to trauma (El-Gabalawy et al. 2020).

Both PTG and PTSD are the possible consequences resulting from exposure towards traumatic stressors (Schubert et al., 2016; Zięba et al., 2019). In fact, various studies have shown the positive association between PTG and PTSD symptoms (Chen et al., 2019; Liu et al., 2017; Marziliano et al., 2020; Vazquez et al., 2021), thus suggesting the coexistence of both PTG and PTSD in the aftermath of trauma (Schubert et al., 2015; Wu et al., 2015). Recent studies in the COVID-19 context also found that PTG is positively correlated with PTSD (Lau et al., 2021; Yan et al., 2021), which indicates both struggle and breakthrough from challenging life events can be a concurrent, ongoing process that results in a combination of negative and positive outcomes (Zięba et al., 2019). Henceforth, the presence of stressors that comprises perceived level of distress and possible PTSD symptoms were identified as playing a facilitative role for PTG among survivors of critical events and trauma.

Resilience

Resilience refers to the process of adaptation and ability to bounce back in response to adversity and significant stressors in life (Moore et al., 2020). The construct of resilience was found to be closely related with psychological hardiness (Georgoulas-Sherry & Kelly, 2019; Sadeghi & Einaky, 2021) and persistence (Daniels et al., 2015; Garza et al., 2014). Precisely, studies have highlighted the significant role of resilience in post-trauma recovery and healing (Bazzano, 2016; Snijders et al., 2018). Ogińska-Bulik & Kobylarczyk (2016) discovered that there is a higher tendency for resilient individuals to experience greater PTG by appraising the traumatic stress as challenges. Studies also stated corresponding findings about the importance of resilience as a protective factor against stressful life encounters (Shatté, 2017; Song et al., 2021) and perceived stress (Abai & Madihie, 2021; Kermott et al., 2019). Hyun et al. (2021) identified resilience, alongside with its subthemes, which are hardiness, persistence, optimism and support to have significant impact on PTG among healthcare workers who had direct exposure towards the MERS outbreak. Furthermore, narrative reviews from Finstad et al.

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(2021) showed that high resilience levels and positive coping strategies are crucial for PTG development during the COVID-19 pandemic. Zeng et al. (2021) also demonstrated the positive association between PTG with psychological resilience and general self-efficacy within the COVID-19 context. Similarly, past studies have examined significant relationships between PTG and perceived self-efficacy (Lotfi-Kashani, 2014; Mystakidou, 2015). In short, literature findings have presented that resilience, together with perceived self-efficacy, persistence and hardiness could foster PTG in the aftermath of a traumatic experience.

Inner Strengths

Inner strengths are a broad concept that encompasses elements to endure and adapt to adversities in life (Lundman et al., 2009). Amongst various core dimensions of inner strengths, researchers have recognised the significance of hope and optimism in promoting PTG among refugees (Bernier, 2021; Umer & Elliot, 2021), survivors of sexual violence (Anderson et al., 2019; Kaye-Tzadok & Davidson-Arad, 2016) and of natural disasters (Subandi et al., 2014; Fatima & Husain, 2019). A study from Vazquez et al. (2021) found that positive core beliefs and optimism were associated with PTG during the COVID-19 pandemic. Nevertheless, researchers have discovered interrelations between internal strengths, precisely, forgiveness, gratitude and spirituality with PTG and wisdom (Ramadan et al., 2019). While past studies have demonstrated the facilitative role of spirituality for PTG (Paredes & Pereira, 2018; Prieto-Ursúa & Jódar, 2020), systematic reviews by Zhang et al. (2021) outlined the importance of spiritual fortitude in enhancing PTG to cope with the COVID-19 outbreak. Correspondingly, Kursheed & Shahnawaz (2020) have found that spirituality and self-compassion were mediators between trauma and PTG, where the role of self-compassion in promoting PTG was also supported by multiple researchers (Connally, 2017; Munroe et al., 2021; Wong & Yeung, 2017). Therefore, past literatures have shown evidence on the relationships between PTG with inner strengths that comprises hope, optimism, spirituality and self-compassion.

Adaptive Coping and Social Support

Coping refers to thoughts and behaviours to manage stressors through the employment of coping styles and resources to alleviate stress (Algorani & Gupta, 2021). While previous studies have indicated the use of specific coping strategies to enhance PTG (Rajandram et al., 2011), the flexible utility of coping strategies that varies across situational demands were highlighted to effectively foster PTG (Kunz et al., 2018). Research findings also demonstrated positive correlation between PTG with adaptive coping (Morris et al., 2020), emotional approach coping (Darabos et al., 2021), active coping (Kamal, 2015; Mesidor & Sly, 2019), religious coping (Lehmann & Steele, 2020; Mesidor & Sly, 2019) and social support seeking (Rzeszutek et al., 2017; Yeung & Chow, 2019). In relation to this, studies also discovered how social support supplements adaptive coping to enhance PTG. In fact, Brooks et al. (2016) found that active coping and social support were significant predictors of PTG among students, crime survivors and trauma workers. Complementing with the integrative role of adaptive coping and social support in promoting PTG within trauma survivors (Cao et al., 2018; Jia et al., 2018), researchers highlighted the crucial roles of expert companionship (Tedeschi & Calhoun, 2016) and emotional expression (Yeung & Chow, 2019) to facilitate thriving processes in response to major adversities. Furthermore, past literature has shown association between active coping strategies and self-disclosure (Zhou et al., 2021), as well as between positive coping strategies and emotional disclosure (Henson et al., 2021) to facilitate PTG. Concurrently, Yan et al. (2021) also found that PTG of discharged COVID-19 patients was correlated with a positive coping style and social support. Hence, adaptive coping strategies that are further supplemented by social support have shown to be associated with fostering of PTG.

Gaps of Study

Despite numerous studies examining PTG under COVID-19 circumstances, only limited research has explored PTG within individuals who had exposure to hospitalised experience due to

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COVID-19 (Sun et al., 2021; Yan et al., 2021). Most COVID-19 studies in the Malaysian context tend to revolve around appraisals of the government's response towards the pandemic outbreak (Abdullah et al., 2020; Elengoe, 2020), epidemiology of COVID-19 progression (Hashim et al., 2021; Jayaraj et al., 2021), social wellbeing of the general public (Moni et al., 2021; Yong & Sia, 2021), and symptoms and treatments of COVID-19 (Elengoe, 2020; Hashim et al., 2021). This signifies a research gap for more studies to contribute findings relevant to PTG among the population of COVID-19 survivors in Malaysia. Moreover, although researchers have successfully explored sociodemographic and psychological correlates for PTG (Chen et al., 2019; Rzeszutek & Gruszczyńska, 2018; Wen et al., 2020), the precise mechanism in terms of the interrelation and interaction between these components remains ambiguous. Henceforth, this study aimed to fill the gap by contributing perspectives of PTG and the precise underlying interplay of components that were derived from hospitalised experience of discharged COVID-19 patients in Malaysia.

Methodology

Qualitative Research Design and Strategy

As this study adopted a qualitative approach, participants were required to fulfil exacting criteria so that in-depth and holistic understanding of participants' experience could be obtained (Mohajan, 2018; Vasileiou et al., 2018). Given the strength of real-time responsivity to revise the research framework and direction as new insights emerge (Busetto et al., 2020), a qualitative strategy allows researchers to comprehensively examine participants' experience, thus enabling fruitful and compelling data to be derived (Austin & Sutton, 2014).

A basic interpretive qualitative research design was employed in this study. According to Merriam (2002), this approach is characterised by research interests towards the participants' process of making meaning of a situation to generate descriptive outcomes by using inductive strategies. Such research design resembles the interpretive nature of a qualitative study (Creswell, 2007; Peshkin, 2000), where researchers attempt to understand participants' views and constructs in making sense of their own experience (Sutton & Austin, 2015). This research approach primarily focuses on interpretation that comprises beyond the objective description of participants' experience, but also the subjective meaning attached to it from the lens of each individual (Aspers & Corte, 2019; Cresswell, 2009).

Participants

Participants were recruited using the purposive sampling method through social media platforms to gather adequate data for data analysis. Several inclusion criteria were set to ensure the recruitment of participants fulfilled the area of interest.

Inclusion Criteria

(a) Being a Malaysian

(b) Aged 18 and above

(c) Has been confirmed, hospitalised, and recovered from COVID-19 Stage 3 or above for at least 3 months

(d) Scored 46 and above in the Post-Traumatic Growth Inventory (PTGI)

Exclusion Criteria

Clinical population with actual diagnosis of psychological disorders.

Sampling Method

The purposive sampling technique was used to identify potential participants that met the criteria for the study. Regarding criteria (c), it was supported by Malaysia's hospital admission benchmark for COVID-19 patients who are symptomatic at Stage 3 and above (Harun, 2021; COVID-19 Management Guidelines in Malaysia, 2020). The 3-month duration refers to studies that demonstrated the emergence of PTG from different sample populations in 3 months after the COVID-19 outbreak (Lau et al., 2021; Peng et al., 2021). Upon recruiting participants that fulfilled criteria (a) (b) and (c), a screening process was

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carried out using the Post-Traumatic Growth Inventory (PTGI) to ensure the eligibility of participants in this study by obtaining a score of 46 and above as an indication of medium to very high levels of PTG. Participants were well informed that only those who fulfilled all inclusion criteria will be eligible to participate in this research through the administration of study information sheet (see Appendix; Figure 1).

Post-Traumatic Growth Inventory (PTGI)

The Post-Traumatic Growth Inventory is an instrument developed to assess positive changes after major adverse life events (Tedeschi & Calhoun, 1996). The PTGI consists of 21 items using a 6-point Likert scale ranging from 0 ("I did not experience this change as a result of my crisis") to 5 ("I experienced this change to a very great extent as a result of my crisis") with a total maximum score of 105 where higher scores indicate greater growth resulting from the trauma (Tedeschi & Calhoun, 1996; see Appendix; Figure 2). Past studies have shown good psychometric properties (Laufer & Solomon, 2006), acceptable to excellent reliability coefficients and content validity (Lenz et al., 2020; Shakespeare-Finch et al., 2013). This inventory consists of five different sub-domains under PTG, which are Relating to Others, New Possibilities, Personal Strength, Spiritual Change and Appreciation of Life. Past literature also provided segmentation of cut-off points for PTGI, with scores of 45 and below indicating none to low PTG levels, whereas scoring 46 and above indicate medium to very high PTG levels (Mazor et al., 2016).

Since perceived trauma is the prerequisite for PTG to occur (Weinberg & Gil, 2016), the utility of PTGI is aimed to assess the extent of positive outcomes after coping with the aftermath of trauma (Tedeschi & Calhoun, 1996). Henceforth, adopting the PTGI cut-off point as an inclusion criterion indicates that the individual has perceived, accepted and grown from the traumatic hospitalised experience.

Data Collection

After ensuring participants fulfilled all criteria, data were collected through semi-structured interviews. The discussion flow was guided by a list of open-ended questions (see Appendix; Figure 3) that were further supplemented by probing questions to explore thoughts and feelings of participants (Adams, 2015; DeJonckheere & Vaughn, 2019). This flexible interview protocol enabled in-depth and rich data to emerge within conversations (DeJonckheere & Vaughn, 2019). A predetermined scope of questions that prompted generative responses were employed while researchers also welcomed other aspects of data from participants that were relevant to the phenomenon of interest (Bearman, 2019). The data collection process was strictly conducted online. Consent was sought through the administration of written consent form (see Appendix; Figure 4) and permission was obtained from participants to record the interviews for generating data transcripts and for observation of non-verbal communication.

Data Analysis

The core principles in data analysis from a qualitative approach involve interpretation and breaking down of significant statements into codes, then reconstructing and categorising them into larger themes to generate narrative descriptions and diagram representations for research findings (Archer, 2018; Cresswell, 2007). As such, Braun and Clarke's (2006) 6-step thematic analysis were adopted for data analysis. As the first step involves familiarisation of the data, the recorded interviews were transcribed while taking note of each participants' non-verbal expressions. For the second step, segments of the data transcripts such as phrases and sentences were highlighted and labelled as the initial codes. Thereafter, these labelled data were grouped to derive hunches and common themes, whereby irrelevant codes were discarded. Finally, after reviewing the themes to ensure accurate representations of data, these themes were finalised, named and defined before forming the results and discussions for the study.

Trustworthiness of Data

To generate meaningful results in this study, respondent verification was carried out where data transcripts were sent to the participants for double-checking (Leung, 2015). Data analyses only proceeded upon receiving confirmation from the participants, alongside necessary amendments to ensure data accuracy and representativeness of the

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interviewee's experience. Besides that, a triangulation process was conducted to continuously compare experiences and perspectives of all participants until consistency across collected information was achieved (Salkind, 2010). The bracketing technique was also employed to avoid the effects of preconceptions towards the research process (Tufford & Newman, 2012). There were reflective discussions among researchers to identify possible blind spots and personal biases that may result in "cherry-picking" data relevant to the desired research outcomes (Allen, 2017; Morse, 2010). A combination of these strategies was consistently used throughout the research process to improve the trustworthiness and credibility of data.

Results

Demographic Information

A total of 5 participants were recruited in this study. As shown in Table 1, 4 males and 1 female participated in this study; 3 participants were Stage 4, and 2 participants were Stage 5 COVID-19 survivors. As the participants' hospitalisation period was between April-September 2021, their vaccination status prior to the COVID-19 infection varied with 3 participants having not received any vaccination whereas 2 participants had received their first dose (see Table 1).

Table 1

Demographic and clinical information of participants.

Name	Gender	Age	COVID-19 Stage	Admission	Discharge	Duration	Vaccination Status
Sam	Male	48	4	10/7/2021	20/7/2021	10 days	Received first dose
Don	Male	50	5	26/4/2021	25/5/2021	1 month	Not vaccinated
May	Female	36	4	20/4/2021	7/5/2021	17 days	Not vaccinated
Dru	Male	48	5	25/4/2021	26/7/2021	3 months	Not vaccinated
Ben	Male	39	4	20/8/2021	7/9/2021	18 days	Received first dose

The collected data revealed 12 themes revolving around hospitalised COVID-19 survivors' experience and perspectives on PTG. Components that contributed to PTG include stressors, perceived distress, adaptive coping, resilience, social support, and inner strengths. Themes of PTG were also derived after participants' discharge and recovery from COVID-19, inclusively, increased pro-health awareness and actions, sense of purpose, positive life view, more agreeableness, change in life priorities and *Carpe Diem*.

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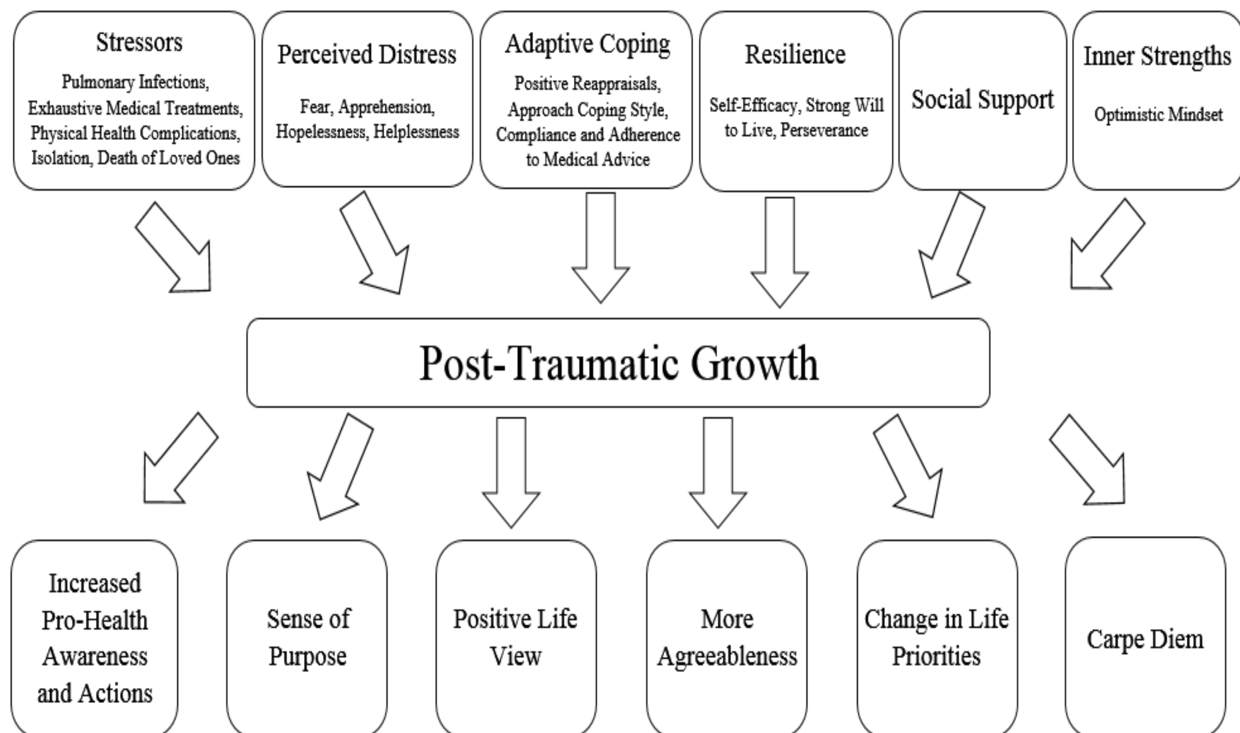

Emerged Themes

Components that Promote PTG

Theme 1: Stressors.

Pulmonary Infections.

An array of symptoms and hospitalisation-related stressors were found among all participants. Although the disease severity and hospitalisation duration vary, the clinical condition of symptomatic pneumonia was prominently found in Stage 4 and 5 COVID-19-infected patients. All participants reported symptoms of pulmonary infections that were characterised by coughing, suffocation and breathing difficulty. Participants had experienced great dependency on supplemental oxygen supply to maintain normal breathing, especially for Don and Dru who were double intubated due to rapid respiratory and heart rate.

Few days after my fever, I started coughing. It wasn't ordinary coughing. Any minor body movements would just trigger the bad coughing, and I can literally feel that the cough comes from my lungs. So, when I cough, I feel like all my inner organs, my lungs were coming out from my cough too.

(May/line 44-47)

As I said, I couldn't breathe smoothly without the ventilator. They (other patients in the same ward) were only slightly dependent on the machine, maybe 3-5 litre of oxygen per minute. But for me, I needed 15 litre per minute. So, I needed much more oxygen than them to maintain normal breathing.

(Ben/line 123-127)

Inside the ICU for 7 weeks, double intubated for short period because at that point my respiratory and heartbeat rate was almost equal, that means I'm breathing very rapidly.

(Dru/line 74-76)

Exhaustive Medical Treatments.

All participants experienced and recognised exhaustive medical treatments as another source of distress during their hospitalisation. Below is a narrative from one of the participants, Dru.

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Because I have needle marks everywhere, so they have to inject it through my stomach directly. So basically, I looked like a punching bag like that. They have to install a permanent line under my arm so that it goes directly to my heart.

(Dru/line 147-150)

Both COVID-19 Stage 5 survivors, Don and Dru were sedated due to their severe breathing condition. The COVID-19 treatment process destroyed Dru's body immunity and in addition to numerous needle wounds, he became susceptible to other diseases.

They needed to put me (in sedation) ... knock me out because my breathing was bad.

(Don/line 47-48)

So, they destroyed my whole body's immunity, and it works, obviously it works, COVID-19 *was cured. But this made me vulnerable to anything else.*

(Dru/line 154-156)

Physical Health Complications.

Following the treatments of COVID-19, all participants experienced a wide range of physical health complications that involved deterioration of lung functioning, especially for Don who had pre-existing diabetes.

The doctor at IPR (Institut Perubatan Respiratori / Institute of Respiratory Medicine) told me that my lungs were quite badly damaged, there were a lot of hard tissues.

(Don/line 67-68)

It was so painful that, after I get out from hospital, I had to go to the doctor and tell them that I had COVID-19, this is what happened to my blood sugar level, it went out of control for a month. It's because of steroids.

(Don/line 289-291)

Because I only have 50% of lung function remaining right now, so if I get infected again, I really couldn't picture how it would be.

(May/line 77-79)

Dru was infected with blood poisoning after his clearance of Coronavirus as a result of the COVID-19 treatment procedure, which prolonged his hospitalisation for another 6 weeks.

I generated a second disease called blood poisoning... So, I need to go through another 6 weeks in the hospital for taking 1200 vials of medications that's broken down to 6 vials for every 6 hours. Again, I sit down and said to myself that I just finished this ordeal, now the second battle comes in.

(Dru/line 162-166)

Most participants experienced sleep disturbances during their hospitalised period, with May and Dru's narratives quoted as below:

…I'm afraid of sleeping. Do you know how scary it was? It's like you're so tired and you wanted to sleep, but you can't because you're afraid that you might not wake up again.

(May/line 271-272)

I was so afraid to close my eyes because I know I will wake up in night terrors, and that night terrors would trigger breathing anxiety… so imagine you're under the respiratory machine but you still think you couldn't breathe.

(Dru/line 88-90)

Even after entering the post-recovery phase, participants encountered side effects including drastic weight loss and temporary physical disability.

When I was at IPR, I walked like an old man, or just like how a baby first starts clumsy walking.

(Don/line 70-71)

I'm a former Malaysian rugby player, big muscle guy, and I've lost all that muscle. I went from 96kg to 72kg, and most of it was muscle, I can barely stand straight for a while… Walking 50 metres was a great achievement, because my leg muscles have gone… I need to walk with the old-man U-shape crutches.

(Dru/line 127-132)

I was close to 100kg, but I lost more than 20kg after being discharged. My wife would tease me

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for my skinny legs… But honestly, it doesn't feel good to have such drastic weight loss within 10 days of hospitalisation, it can be quite worrying.

(Ben/line 143-147)

I was walking like a 70 or 80-years-old when I was discharged. My breathing was as rapid as my heartbeat. I'm a cyclist and I had a hard time catching back to my usual pace.

(Ben/line 263-265)

Isolation.

Apart from that, participants reported isolation as another hallmark of their hospitalisation period. Several examples are shown below:

…I couldn't see anyone aside from the doctors and nurses. You know, even when sending meals, the pantry aids only place the trolley outside the ward or just move it a little bit near the ward and leave. Can you imagine this? It's like even the hospital staff were afraid of us and trying to avoid us. We're like monsters to them.

(May/line 258-261)

But 7 weeks in ICU even nurses don't want to spend time with you, I mean I don't blame them… but not having human touch other than a screen that I can do video calls on… it helps but that human touch, not having the ability that you can touch another human being… puts you into depression.

(Dru/line 84-87)

If you have a cancer and a heart problem, one of the 36 critical illnesses, people still can visit you. But this disease, nobody can.

(Dru/line 92-94)

Death of Loved Ones.

Nevertheless, one participant experienced the death of a loved one in a family cluster case. Don's mother passed away due to COVID-19 just before his hospitalisation.

My mum actually passed away just before I went to CAC (COVID-19 Assessment Centre). So, when I was in ICU, I was actually quite emotional, and I kept telling the doctor to discharge me. But to be fair to them, I said, discharge me at the earliest possible moment, I would like to get out of here as soon as possible, because I didn't get to say goodbye to my mum.

(Don/line 113-116)

Theme 2: Perceived Distress.

Fear.

Aside from stressors, participants identified perceived distress within their survival and recovery journey of COVID-19. All participants recognised fear as a prominent distress in response to surrounding deaths.

At the very beginning, I was only able to stay at the Emergency Unit due to shortage of beds and wards… I have witnessed a lot of deaths due to COVID-19, witnessing the Islamic way to pack and handle dead bodies.

(Sam/line 103-106)

Well, I did witness how they moved the corpse to somewhere else… I saw patients from other wards who died due to COVID-19 were packed and transported to the mortuary, which can be terrifying.

(Ben/line 215-217)

Many people may think that getting infected with COVID-19 is a small matter, but actually once you get into the hospital, you should be afraid because there's a chance that you could never get out anymore.

(May/line 202-204)

…Some people come and can't make it to go home. So, during my time there (in ICU) for 7 weeks, about 9 people came and died.

(Dru/line 114-115)

Don also elaborated his fear towards his own near-death experience as the doctor at IPR told him that they would not be having the conversation if he were a smoker.

He said if you were a smoker, we would not be having this conversation right now. So, I said

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alright, I chose not to smoke, that also got to me that, oh I was so close to death.

(Don/line 69-70)

Helplessness.

Given the pandemic restrictions and safety measures implemented during the MCO period, most participants also revealed their perceived helplessness in response to environmental and emotional isolation throughout their hospitalisation.

Even then, later I only realised that even if they discharged me, I also couldn't do anything, because during the MCO they were quite strict about a lot of things. When my mum's body was released, the hospital had a caretaker to handle everything, and my brother who had to handle everything after that was only able to go near and hold my mother after she was cremated.

(Don/line 117-120)

What about my family after I died? They can't even come to have a glance at my dead body. Moreover, my family is at Kelantan, are they even allowed to travel here to visit me? I mean, they were already having trouble sleeping because of me, so I could only endure everything, the pain, the distress, on my own.

(May/line 86-92)

*There were many times when I feel like giving up. Because sh*t, I'm here in the ICU, this is so bad. And that's the emotion that I couldn't share with anyone because nobody can understand what you're going through.*

(Dru/line 96-99)

Hopelessness.

Participants also reported their perception of hopelessness and thoughts of giving up fighting due to severe COVID-19 symptoms, as elaborated by May and Dru:

Hopelessness, of course there is, especially in that kind of environment. At those moments when I was severely coughing, I did tell myself to just give up and not fight anymore.

(May/line 84-85)

So, all that, plus the disease and the loneliness, some days I just wake up and wonder, why bother fighting it anymore?

(Dru/line 110-111)

Apprehension.

Moving forward to the disease recovery, many participants experienced apprehension because of post-COVID-19 conditions and the anticipation of long-term rehabilitation.

The only thing that bothered me at that time was the fact that my blood oxygen was low, around 70%, so I have a ventilator mask on me. I wanted to take that out and they told me the only way is through breathing exercises which took months. So that was my worry, and about how fast I could get out of that place.

(Don/line 244-247)

There were so many worries for me even when I left the ICU to the HDU (High Dependency Unit), to the normal ward and finally go home. Every phase of that there were worries, about how could I readjust back again, would I be back to normal again? It's more than a year now since I got discharged… I don't have the energy to lift my daughter and the shopping bags for too long… Recovery from the disease is one thing, but because your bodily resources have been wasted, the next thing you need to deal with is another set of anxiety.

(Dru/line 191-199)

Theme 3: Adaptive Coping.

Positive Reappraisal.

In response to the stressors and perceived distress, adaptive coping was employed to overcome COVID-19 hospitalisation and recovery. Positive reappraisal, the reinterpretation of stressful life events as benign or beneficial has been identified as a coping strategy for most participants.

I keep telling myself that my symptoms were mild, just some fever, and this can be recovered with medication. So instead of keep worrying that I will really be dead and what to do, I tried my best to

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"想开一点" (xiang kai yi dian: think wider and openly) and do not give myself distress.

(Sam/line 131-134)

Again, I stopped myself from thinking too much and just focus on getting enough rest. I believe that as long as I give more time for my body to take rest and restore the functions, I will get better, I will recover… I have been working for decades without rest. So, I kind of take this as an opportunity to relax and take some rest.

(Ben/line 97-104)

I keep telling myself that I'm already at a better place than those who are having kidney diseases and receiving cancer treatments. Because their battles never end, especially those who requires dialysis. Comparing with them, my pain was just momentary, I only felt the torture in some particular moments.

(May/line 55-58)

Because when I see myself, I was in the "been there, done that" situation. I was recovering, I already woke up from my "sleep", so I was not anywhere as bad as they (other patients) were.

(Don/line 237-239)

When I woke up from my induced sleep, in my head it's… half the battle is won. I'm already on the path of recovery. I'm not in any immediate danger, unless something happened that turned it upside down. I'm already in the recovering side, the worst has come and past.

(Don/line 330-333)

Approach Coping Style.

Furthermore, some participants adopted an approach coping style by taking initiatives to actively seek strategies for their recovery.

In my head it was… I have to go through it, I don't think I like it, I don't think it will be easy, but I got no choice. It's like… it's either do or die. You know you have to do something, do what you can and hope you recover faster, recover better, recover back to your old self.

(Don/line 270-273)

Reading, to a man like me who's very technical, reading that there are options, reading that there are survival rates, it gives me the triggers in mind to tell myself that "You can do this, it's easy-peasy".

(Dru/line 272-274)

I watched many videos and news about COVID-19 so that I gain sufficient information about my condition, where I'm at and what I can do even I have already got hospitalised. I want to keep myself feeling optimistic by getting to know more about COVID-19 and what's the situation out there.

(Ben/line 80-83)

Compliance and adherence to medical advice.

Compliance and adherence to medical advice was found to be another component for participants to adaptively cope with the disease and post-recovery from COVID-19.

Therefore, when the doctors asked me to stop taking in supplements, I really stopped everything. I completely adhered to the doctors' advice, and I think this is so important.

(May/line 131-133)

…the doctor said they would put me in the respiratory ward and teach me how to breathe. With the breathing exercises and if you're diligent, within a month you will feel so much better, and you can be back to normal within a few months.

(Don/line 261-264)

But during the recovery period, it has a lot to do with your compliance to the exercises given to gain back your strength. And listen to the doctors for not simply taking any supplements. So, I follow doctors' instructions to do more exercise so that my alveoli can function normally and take more oxygen.

(Ben/line 260-263)

Theme 4: Resilience.

Perceived Self-Efficacy.

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Aside from that, resilience was identified as a significant element among participants. Some participants have perceived self-efficacy, the belief towards competence of oneself in combatting the disease.

I really believe in my own health condition. I know that I did not have much serious health concerns and I believed that I will be okay. So, this belief somehow became a motivation for myself.

(Sam/line 119-121)

…I have always been facing challenges in life with optimism and positivity. Not even a second that I think that I need to plan for my funeral or what, not at all. I believe that I will get better and survive through every challenge.

(Ben/line 327-329)

Strong Will to Live.

Participants also attributed their success in battling COVID-19 to their strong will to live.

There's only one thing in my mind, which is I have to survive through this.

(Ben/line 204)

For sure I did feel hopeless. But I kept telling myself that I don't want to die at the hospital. It was so lonely to die here, nobody could say goodbye to me... If I died because of COVID-19, my body would just get simply handled and sent for cremation… I don't want to pass away this lonely. So, this is probably how I survived through the experience with my strong will.

(May/line 110-116)

Perseverance.

In relation with this, perseverance, the continuation of persistent effort in achieving a goal in spite of challenges and obstacles was found among participants in dealing with their symptomatic manifestations.

I remember there was once that I felt like it's unbearable, because I have been non-stop coughing for more than half-an-hour… In this 30 mins coughing, I kept telling myself to hang in there, just hang in there for a little bit longer and I will be alright.

(May/line 92-96)

So, it's about being a sportsman, especially playing rugby, we suffered a lot of pain, and we can choose to give up or play on. We pushed our mind past that pain to be a better player… You want to play (on the) national team, you can't give up. I believe this is one of the biggest attributes or coping mechanisms for me to not fall further into that rabbit hole (in my path of recovery).

(Dru/line 178-186)

Theme 5: Social Support.

All participants recognised social support as being integral to their recovery. Sam and Don stated that video calls with family members and friends gave them a sense of comfort and company.

Oh yes, being able to communicate with my friends and family, receiving care and concerns from them really brought me some sense of comfort.

(Sam/line 138-139)

When I was hospitalised, the kind of support that I received was basically, if you called video calling through WhatsApp as a support, then I got the support that I needed. In the sense that, they kept me company, I could tell them what went through my head at that time.

(Don/line 317-319)

May and Dru highlighted the encouragements and support they received from the frontliners.

…the doctors and nurses really helped me a lot, their encouragements… and also at that time, I can only trust them. If I don't trust them, and if my condition really deteriorates that I need to be intubated or nearly dying, it's the doctors and nurses who will be holding my hand in my last moments when I die. So, I trust them completely. Without them, I couldn't even get discharged. They gave me a lot of confidence and encouragement; they boosted my will a lot to get through this.

(May/line 140-145)

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Imagine, I'm 48 and a nurse is cleaning me, it dehumanises you but again, the nurses never complain once, never showed me attitude. Yeah, so those are the major supports I had in my life in those periods.

(Dru/line 328-331)

Dru and Ben also elaborated on different sources of support that was given by their company, family, and friends.

Yeah, that was a massive thing, for the chairman and president (to) greenlight that RM100,000 to me, no questions asked, not even taking it as a loan to me, it was just given to me as a senior management person. It's just heart-warming you know... So, from the workplace to my wife not giving up on me… And good friends, I have a very small cluster of friends that just never give up on me, always sending me things, stupid posts and jokes, every day.

(Dru/line 316-323)

Actually, I didn't tell many people about myself being a confirmed case, because I felt embarrassed by this. But some of my friends who knew this texted me to ask about my wellbeing, ask if I need any help. So, this made me think that, oh I do have friends who care about me and would encourage me when I get infected by Covid.

(Ben/line 204-208)

Oh, well, the moment when my mum know that I get hospitalised, she asked her brother and my relatives to "ask the god" and seek divine advice for me (both laughed). And another side of Christian relatives organised an online meeting to do prayers for me. I felt so touched that... they were willing to pray for me even we have different religion. So, this brings me massive spirit, that I tell myself that I couldn't let them down.

(Ben/line 110-114)

Theme 6: Inner Strength.

Optimistic Mindset.

Nevertheless, the inner strength of an optimistic mindset has been found to play a contributing role in participants' recovery by having positive thoughts and attitudes to survive and be discharged.

Positivity is so important and it's fortunate that I could survived through the ICU with my optimism.

(May/line 246-247)

Especially when I was so hopeless and exhausted, at that time everything can be my motivation. As simple as getting out from here to fix my KFC cravings can be my motivation too! (laughed) It's about how we notice and magnify these motivations.

(May/line 186-189)

I believe that the more we drown into negative thoughts, keep thinking about the negative possibilities, the more likely things will turn out with unfavourable outcomes. So, I always uphold an optimistic mindset and attitude, and think positively.

(Ben/line 67-70)

Themes of PTG

Theme 7: Increased Pro-Health Awareness and Actions.

As reported by most of the participants, they perceived themselves as having increased pro-health awareness and actions after their hospitalisation. Sam and May became more vigilant towards COVID-19 to avoid a second infection.

I would say that this disease is really no joke. I have learned to do whatever I can to avoid getting infected again.

(Sam/line 148-149)

When people say that I could take it easy after my booster dose, I still feel like I need to have the awareness towards my own health condition.

(May/line 76-77)

Right now, I was thinking that I do not want my kidneys to die on me. So, I better get my sugar under control. So, I told the doctor that if I could

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survive from COVID-19, I could also survive for taking 4 injections per day, and I did that.

(Don/line 293-300)

Ben had decided to change his job and work environment for his own health interest.

I used to be an engineer back then, I worked in construction sites. The environment was dusty, and I always had close contact with immigrants who didn't follow the SOPs closely… So, after recovering from COVID-19, I decided to change my job, learning to venture into sales.

(Ben/line 238-242)

I want to appreciate my life more and do something to protect my health before it's too late. Of course, I earn less compared with being an engineer, but it also brings me less stress. So, it's still okay for me as long as I'm not giving myself too much pressure, my health and wellbeing are being taken care of.

(Ben/line 252-255)

Theme 8: Sense of Purpose.

Apart from that, some participants have identified themselves as having a sense of purpose after their recovery. This refers to intentions of spreading awareness about their encounter and insights derived from COVID-19 infection and hospitalisation. May realised that her sharing could raise awareness and impact lives with her story.

I did not even think that I can be famous due to COVID-19. I did not expect that my Facebook post have more than 5 million reposts… So, this made me feel like, my words could have an impact to the society. I have been thinking what I can do in the future, to impact lives with my life. Everyone needs to be encouraged.

(May/line 242-246)

But for me, there's a lot of hardships I have gone through to survive COVID-19, and I believe that God gave me the second chance to live for a purpose. So, I feel like by sharing my stories and spreading awareness, if I could impact one person, I'm actually saving the whole family's lives.

(May/line 287-290)

Similar acts were also found in Ben who has been actively sharing his stories as a COVID-19 survivor.

…I know I need to spread awareness to everyone… I just hope that I could create some positive impact on people by sharing my stories as a COVID-19 survivor… I mean, yes, it's true that people may die of COVID-19, but I also want to let them know that you can survive through this. That's why I want to spread the correct message from my true experience as a COVID-19 survivor, I want to tell people there's still a possibility for you to get out alive from the disease.

(Ben/line 157-167)

Theme 9: Positive Life View.

Furthermore, participants have a positive life view after surviving through the COVID-19 battle. Don tends to worry less and learnt to see the positive side of things, whereas Ben became more zestful to live a positive life.

We do what we can, and we don't when we can't, and hope for the best… I used to think I'm quite relaxed and easy-going person before, but comparing myself then and now, I'm much more easy-going right now (laughed). So, I tend to turn everything into something funny, I tend to see the funny and positive side of things, even when I'm supposed to be serious (giggled).

(Don/line 362-367)

I'm always a vibrant and optimistic person, so I tend not to perceive things as great challenges or huge obstacles. But of course, after this, it made me even more zestful to live a positive life, almost as energetic as a cow (a descriptive way to portray someone who is frisky and energetic in the Chinese culture)! (laughed).

(Ben/line 319-321)

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Theme 10: More Agreeableness.

Furthermore, some participants recognised that they were having a more agreeable attitude in life and social relationships. Sam and May perceived themselves as being less stubborn after the conquest.

Oh, but I have somehow learned to not be that stubborn for certain things in life.

(Sam/line 153-154)

I would say, before this I'm a stubborn person, my views towards things are very unlikely to be changed or shaken… After this near-death experience, there are a lot of things that I'm more able to look openly, be less stubborn on things.

(May/line 17-20)

May and Dru found themselves having a greater acceptance on things.

Before this, for me it was always black or white, right or wrong, there's no in-between or grey areas. I can't tolerate ambiguity. But now … it's like there are things that I think it's wrong, but you may think it's right... Although at the end I may still think that it's wrong, but I become more able to accept your point of views, your thoughts, and your perception on things. It's like I may still disagree, but I will still respect and accept your perspectives.

(May/line 211-219)

Now I have learned to accept things a little bit better. Maybe I wasn't a perfect husband, but now I'm more forgiving, I don't pick on the little things anymore.

(Dru/line 432-434)

Theme 11: Change in Life Priorities.

Participants have realised a change in life priorities after getting hospitalised and recovering from COVID-19. Sam and Don recognised that money matters less to them and are now more willing to spend instead.

I really valued my 血汗钱 (xue han qian: money that was earned through hardships and great efforts). But after this experience, I realised that 人一世物一世 (ren yi shi wu yi shi: people should not grasp too hard on things and valuables because humans only live once and whatever we earned could not be brought to the afterlife). So, I learned that I should just spend when it's needed or spend on things that bring me value. Money matters less to me as long as I spend it meaningfully.

(Sam/line 158-163)

I have to admit, after this, priorities in life changed. More important to be happy, to do what you want to do than to chase money.

(Don/line 123-124)

So, after the hospitalised experience, I become like oh I have some money, if I'm not going to use it now, when I'm dead, all my hard work, I will not be able to enjoy the fruits of my labour! So, it's the other way round now.

(Don/line 404-406)

May stated that the biggest takeaway from her hospitalised experience was to have greater appreciation towards her family and friends.

And most importantly, now I cherish my family and friends even more. This the biggest takeaway if you ask me about some changes in my own attitude and life views, these are the most significant changes.

(May/line 20-22)

Theme 12: *Carpe Diem*.

Carpe Diem is the Latin for "seize the day", which refers to an attitude of making the most in the present while the person can. Participants have identified *Carpe Diem* as one of the most significant changes after getting through this critical life event. Sam was motivated to achieve goals while he still could.

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…and also do things and achieve goals when I can instead of allowing myself to regret for not doing them when I'm still alive.

(Sam/line 155-156)

Don who used to be happy-go-lucky started to talk about marriage with his partner after he woke up from his coma.

Oh, I started talking about marriage, after I got out from my coma. Before that I was just the happy-go-lucky guy (giggled), and this poor girl was waiting for me to say something... for 10 years I didn't say anything…

(Don/line 125-128)

Dru decided to leave no regrets and stop waiting for tomorrow when he could do things today. Starting to live his life, he bought himself a Porsche and went for a nice holiday with his wife.

So, I said no, I want to start living my life. If I want to buy a Porsche, I will just buy it because I can afford it. I don't want to sit down and just wondering "what if" anymore. I told my wife if we want to go for a nice holiday, we will just pack up and go for it, I don't care how much it costs as long as the money is there, I'm just going to do it. Yeah, so that's my main lesson, if you can, just do it… If you couldn't afford it, then that's a different story because it's not tangible anymore. But I can, so just don't wait. Why do you want to wait for tomorrow when you can do it today?

(Dru/line 374-382)

Discussion

The research findings in this study were in line with past literature, which indicates that the presence of stressors, perceived distress, adaptive coping strategies, resilience, social support and inner strengths are components that facilitate Post-Traumatic Growth among hospitalised COVID-19 survivors. Given that viral pneumonia is the prominent indicator for COVID-19-related hospitalisation (Bieksiene et al., 2021; Musat et al., 2021), clinical studies have examined the long-term health implications of COVID-19 survivors including significant reduction of lung functioning capacity (Bellan et al., 2021; George et al., 2020) and a wide range of physical health complications (Prescott & Girard, 2020; Shanbehzadeh et al., 2021). In addition to the exposure of perceived life threat (Nguyen et al., 2022; Wu et al., 2022) and isolation (Hsiao et al., 2021; Kusimo et al., 2022), the hospitalised experience could be acknowledged as a traumatic life event (Tarsitani et al., 2021). As such, hospitalised COVID-19 survivors have experienced complex psychological distress that was closely intertwined with the fear of death (Ju et al., 2022; Piras et al., 2022), resulting in possible symptoms of PTSD, depression and anxiety after discharge (Vlake et al., 2021; Wu et al., 2022). Needless to say, pandemic restrictions in rituals and mourning practices have brought enormous grief and despair when dealing with the death of loved ones among family clusters (Aguiar et al. 2022; Dennis et al., 2022). Surrounded by death and knowing that one's life could end with mere solitude, the perception of distress is profoundly experienced by hospitalised patients of COVID-19. Nonetheless, the coexistence of mental distress and positive mental health in post-discharge implies that COVID-19 survivors have the tendency to flourish from the traumatic encounter (Bassi et al., 2021; Guo et al., 2022). In fact, the employment of adaptive coping strategies and perceived social support were found to be integral to post-COVID-19 recovery and growth (Xie & Kim, 2022; Yan et al., 2021). As resilience was identified as a protective factor against adversity (Luo et al., 2022; Xiao et al., 2022), concurrent with the disposition of optimism as a buffer towards stressful life events (Koliouli & Canellopoulos, 2021; Waters et al., 2021), there was a greater prospect for COVID-19 survivors to have positive appraisals towards their hospitalisation, hence achieving PTG from the significant life crisis.

Changes in life priorities were consistent with another PTG study involving COVID-19-hospitalised survivors, indicating that their re-evaluation of life priorities stems from a greater appreciation towards being alive (Sun et al., 2021). Such positive changes can be attributed to the existential growth after the traumatic exposure, thus facilitating the redefinition that human values are more significant than material object

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possessions (Gökalp et al., 2022). In relation to this, participants also exhibited increased agreeableness which has benefitted their social interactions. Precisely, the improved social relationships are closely intertwined with gratitude towards receiving social support throughout their COVID-19 hospitalisation and recovery (Guo et al., 2022; Sun et al., 2021). On top of that, participants disclosed that symptomatic suffocations, witnessing death at the Emergency Unit due to shortage of beds and wards, ICU admissions and prolonged hospitalisation have contributed to close-to-death perceptions. The realisation of life's fragility does not only promote greater life appreciation, but also prompting a *Carpe Diem* attitude to seize the day. As the philosophy asserts to live life fully within one's limited lifespan to deepen their existence (Dangwal, 2022; Dyregrov, A. & Dyregrov K., 2019), the PTG theme of *Carpe Diem* is immensely connected with one's reappraisal of life priorities to place more emphasis and actions to leave no regrets after surviving the disease. Attempting to make the most of a fulfilling life has urged corresponding pro-health awareness and actions as efforts to elongate life expectancy. The research findings are in line with similar studies that found active engagement in preventive and proactive healthcare among post-discharge of COVID-19 survivors (Kusimo et al., 2022; Sun et al., 2021). In addition, such health awareness tends to be transferrable from personal pro-health attitudes to spreading health awareness to others. The greater willingness to be altruistic is aligned with the derived sense of purpose, meaning and responsibility to help others from the hospitalised experience (Sun et al., 2021), which brought personal significance to oneself (Smith, 2017). Nevertheless, successful conquests in the COVID-19 battle have been found to reinforce a positive life view after thriving through hospitalisation and recovery. As event-related growth involving the positive outlook of life could be obtained with adequate care and support (Wang et al., 2021), this implies that the emergence of PTG could be facilitated through the shaping of a nurturing environment that encourages recovery and growth from COVID-19.

Limitations

As the mean age for COVID-19-related hospital admission is 34 (Sim et al., 2020) whereas 63% of fatalities were found in populations aged 60 above (Hashim et al., 2021), these factors have restricted the selection from the sample pool and representativeness of research findings to only COVID-19 survivors aged between 30-60. Another limitation was the difficulty in snowballing participants. Aside from the concerning mortality and health complications rate among hospitalised COVID-19 patients that may have impacted their willingness in research participation (Hashim et al., 2021; Zaki et al., 2022), the challenges in participant recruitment were also associated with survivors' reluctance in sharing their experience. This could be attributable to unresolved traumatisation or ongoing healing process from the distressing encounter (Srivastava et al., 2021), as well as feelings of shame and fear of social discrimination (Li et al., 2020; Park et al., 2020). Nonetheless, this signifies the importance of the study and future research directions that examine other positive dimensions of COVID-19 which promote strengths and empowerment in response to adversity.

Recommendations

The primary recommendation would be for COVID-19 and any possible future pandemic rehabilitation to adopt a biopsychosocial model with an interdisciplinary approach by considering the complex interactions between medical conditions, emotions and social factors. While studies have highlighted integrative workforces in COVID-19 rehabilitative management (Chuang et al., 2022; Wainwright & Low, 2020), authorities should also acknowledge that COVID-19 patients are susceptible to psychological distress due to isolation and the possibility of death without closure, which induce tremendous helplessness and hopelessness (Galbadage et al, 2020; Abu Haleeqa et al., 2020). Henceforth, it is recommended to include mental health professionals in managing patients' psychological well-being through individualised counselling and therapeutic interventions. At times of isolation,

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frontliners are the closest allies and the last person whom patients hold on to in their last breath. As such, there should also be continuing effort to establish a supportive hospital environment for both patients and frontliners, as there will be no room for frontliners to take care of patients if they were not being taken care of in the first place. Extending further from the participants' experience, it is certainly a continuous lifelong learning for even adults to adapt to an array of challenges across lifespan with the flexible use of adaptive coping strategies. Knowing that resilience and inner strengths are integral to facilitating positive appraisals in the face of adversity, the educational framework should also include curriculums that foster the populations' ability to bounce back from obstacles which does not only aid in their survival, but also nurture their confidence to thrive and prosper from the ups and downs of life.

Conclusion

This study examined components that facilitated Post-Traumatic Growth including the presence of stressors, perceived distress, adaptive coping strategies, resilience, social support and inner strengths alongside with their respective subcomponents. The research findings are in line with other pandemic-related PTG studies while also exploring PTG themes of increased pro-health awareness and actions, sense of purpose, positive life view, more agreeableness, change in life priorities and *Carpe Diem* that were uniquely found among hospitalised COVID-19 survivors in Malaysia. To quote one of the research participants, "*This disease has shown the world that your life can be snapped out without you even thinking about it… we have mitigating plans for most diseases, but there's none for a pandemic*", this study has provided insights into the subjective hospitalisation experience and growth journey in the eyes of COVID-19 survivors. Nevertheless, the recommendations of this study can be a pivotal reference for political and community stakeholders to go beyond alleviating the negative impact of COVID-19, but also extending towards the positive dimensions to achieve pragmatic outcomes from this global health crisis and the lessons learnt within to being better prepared for future challenges.

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where I would like to make a triumphant salute with this publication, wholeheartedly.

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Appendices

Figure 1

Study Information Sheet that includes nature, purpose, criteria and procedure involved for the research. Psychological resources were also listed for participants in the event of feeling discomfort at any point of time of the research process.

Study Information Sheet

Research Title: Be Blessed to Respire: A Qualitative Approach to Understand Post-Traumatic Growth among Covid-19 Survivors in Malaysia

What is the purpose of this research?

To obtain a comprehensive understanding on post-traumatic growth derived from hospitalized experience among Covid-19 survivors in Malaysia.

Why are you invited to this research?

You are invited to take part in this research because you fulfill the inclusion criteria of targeted participants for this research. The criteria include:

1. Malaysian
2. Aged 18 and above
3. Has confirmed, hospitalized, and recovered from Covid-19 for at least 3 months
4. Scored 46 and above in the Post-Traumatic Growth Inventory (PTGI) that indicates medium to very high levels of PTG
5. Able to read, understand and communicate in basic English
6. Have basic computer literacy

NOTE: Only those who fulfilled ALL criteria will be accepted as participants in this study.

What is involved in this research?

A semi-structured interview that involves questions on participants' demographics, detailed experience about hospitalization and recovery from Covid-19.

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Is there any danger?

There is a likelihood that participants might face possible psychological risks and discomfort during the interview session. Helpful resources will be provided in this event for participants: (1) Befrienders Hotline number: 03-76272929 (24 hours) and (2) Mercy Malaysia Psychosocial Helpline: 03-29359935 (8am-5pm daily)

How does this research help me?

1. As the research aims to gain comprehensive views on participants' journey as a Covid-19 survivor, this study will be able to contribute more understanding towards hospitalization and recovery experience of Covid-19 survivors to break discrimination and stigma towards this population.
2. Research findings will provide insights to community stakeholders and the general public about significance and elements in shaping a supportive environment to aid recovery and psychological growth of Covid-19 patients.

Figure 2

Post-Traumatic Growth Inventory (PTGI) that will be used for screening process in recruitment of participants.

Post Traumatic Growth Inventory

Client Name:________________________ Today's Date:____________

Indicate for each of the statements below the degree to which this change occurred in your life as a result of the crisis/disaster, using the following scale.

0 = I did not experience this change as a result of my crisis.
1 = I experienced this change to a very small degree as a result of my crisis.
2 = I experienced this change to a small degree as a result of my crisis.
3 = I experienced this change to a moderate degree as a result of my crisis.
4 = I experienced this change to a great degree as a result of my crisis.
5 = I experienced this change to a very great degree as a result of my crisis.

Possible Areas of Growth and Change	0	1	2	3	4	5
1. I changed my priorities about what is important in life.						
2. I have a greater appreciation for the value of my own life.						
3. I developed new interests.						
4. I have a greater feeling of self-reliance.						
5. I have a better understanding of spiritual matters.						
6. I more clearly see that I can count on people in times of trouble. Text						
7. I established a new path for my life.						
8. I have a greater sense of closeness with others.						
9. I am more willing to express my emotions.						
10. I know better that I can handle difficulties.						
11. I am able to do better things with my life.						
12. I am better able to accept the way things work out.						
13. I can better appreciate each day.						
14. New opportunities are available which wouldn't have been otherwise.						
15. I have more compassion for others.						
16. I put more effort into my relationships.						
17. I am more likely to try to change things which need changing.						
18. I have a stronger religious faith.						
19. I discovered that I'm stronger than I thought I was.						
20. I learned a great deal about how wonderful people are.						
21. I better accept needing others.						

Cont.

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Post Traumatic Growth Inventory Scoring

The Post Traumatic Growth Inventory (PTGI) is scored by adding all the responses. Individual factors are scored by adding responses to items on each factor. Factors are indicated by the Roman numerals after each item below. Items to which factors belong are not listed on the form administered to clients.

PTGI Factors

Factor I: Relating to Others
Factor II: New Possibilities
Factor III: Personal Strength
Factor IV: Spiritual Change
Factor V: Appreciation of Life

1. I changed my priorities about what is important in life. (V)
2. I have a greater appreciation for the value of my own life. (V)
3. I developed new interests. (II)
4. I have a greater feeling of self-reliance. (III)
5. I have a better understanding of spiritual matters. (IV)
6. I more clearly see that I can count on people in times of trouble. (I)
7. I established a new path for my life. (II)
8. I have a greater sense of closeness with others. (I)
9. I am more willing to express my emotions. (I)
10. I know better that I can handle difficulties. (III)
11. I am able to do better things with my life. (II)
12. I am better able to accept the way things work out. (III)
13. I can better appreciate each day. (V)
14. New opportunities are available which wouldn't have been otherwise. (II)
15. I have more compassion for others. (I)
16. I put more effort into my relationships. (I)
17. I am more likely to try to change things which need changing. (II)
18. I have a stronger religious faith. *(N)*
19. I discovered that I'm stronger than I thought I was. (III)
20. I learned a great deal about how wonderful people are. (I)
21. I better accept needing others. (I)

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Figure 3

A list of open-ended questions will be used as guidance for discussion flow of semi-structured interviews.

No	Questions	Components Covered
1	What was your experience as a survivor of Covid-19?	Participants' experience
2	Could you elaborate your experience throughout your hospitalisation?	Participants' experience
3	Did you ever feel hopeless or overwhelmed?	Stressors: perceived level of distress
4	How did you cope with the situation?	Adaptive Coping: Coping styles
5	Did you believe that you would be able to cope with the situation?	Resilience: self-efficacy
6	How hopeful were you to get through this?	Inner Strengths: Hope
7	Were there any strategies that have helped you to get through this?	Inner Strengths, Coping Strategies, Adaptive Coping, Social Support and other components that facilitate PTG
8	How would you describe the support you received throughout the experience? (*if applicable)	Social Support
9	Were there any lessons learnt from the experience?	Themes of Post-Traumatic Growth
10	How would you describe any changes in yourself after the experience?	Themes of Post-Traumatic Growth
11	Are there any other things that could have possibly contributed to your change?	Other components that facilitate PTG

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Figure 4

Written Informed Consent Form will be administered alongside the Study Information Sheet to ensure participants are well informed about the nature, procedure and potential risks of the study.

Written Consent Form

Project Title: Be Blessed to Respire: A Qualitative Approach to Understand Post-Traumatic Growth among Covid-19 Survivors in Malaysia

I ____ (NRIC No. ______________________)
(Name of Volunteer in block letters)

have read or have been verbally informed and understood all information given to me about **my** participation this study. I have been given the opportunity to discuss it and ask questions. All my questions have been answered to my satisfaction and I voluntarily **agree** to take part in this study. I understand that I will receive a copy of this signed Written Informed Consent Form.

________________________________ ______________________
Signature of Volunteer Date

I have explained the nature and purpose of the study to the Volunteer named above.

________________________________ ________________________ _________________
*Signature of Principal Investigator/ Co-Investigator NRIC No Date

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