

Original Research Article
**I CANCERVIVE: EXPLORING THE MODERN
TRAVAILS OF CANCER-STRICKEN
ADOLESCENTS IN THE PAND EMIC NEW
NORMAL**

ABSTRACT

Currently, the world faces two critical challenges: the COVID-19 pandemic and surging cancer cases. Healthcare systems worldwide, including the Philippines, struggle to cope with rising cancer patient mortality. Urgent action and innovative solutions are vital to managing cancer care amidst the ongoing pandemic. Hence, this study explored the journey of adolescent cancer patients who are receiving treatment during the pandemic particularly the present challenges with cancer treatment, its holistic repercussions, the patient's coping mechanisms, and their significant life breakthroughs. It employed a qualitative multiple-case study, utilizing semi-structured interviews to collect data from four (4) pediatric hematology-oncology cases. The data was analyzed using content analysis wherein the narratives of the participants were compared. The findings of the study revealed themes that represent the challenges experienced by cancer patients namely, (1) treatment and other medical services disruption; (2) reduced social support; and (3) increased contamination-related anxieties. The immediate repercussions included (1) psychological disturbance, stress, and depression; (2) uncertainty and emotional distress; (3) stronger behavioral adherence to COVID-19 prevention measures; (4) increased gadget usage/gadget dependence, and (5) decreased scholastic involvement. Further, the participants' coping mechanisms include (1) active coping strategies via engaging activities; (2) awareness and acceptance of the current situation; (3) strong social and spiritual support, and (4) positive and active mind setting. The insights gathered from the analysis are (1) the need for better access to cancer-related services and assistance, and (2) the call for more psychological health intervention programs. The findings showed that the insights and realizations of participants emphasized the need for better access to cancer-related services and assistance and a calling for psycho-oncological therapeutic interventions for fellow cancer patients.

Keywords: descriptive case study, cancer-stricken adolescents, leukemia patients, COVID-19 pandemic, treatment challenges, insights.

INTRODUCTION

The foundation of daily life is an endless cycle of life, death, and rebirth that continues to perpetuate regardless of our mindful resistance. It is the natural order of things over which we humans have no control, but young children and adolescents afflicted by cancer had to deal with this at an aggravating level. They become more aware of their mortality at such an early age and had to make concessions in order to survive cancer and to live life fully.

The COVID-19 outbreak had ravaged various aspects of our society and profoundly impacted cancer healthcare delivery worldwide. As per the World Health Organization [49], the number of individuals determined and diagnosed to have cancer globally arrived at 19.3 million, with the quantity of individuals' mortality rates expanding up to ten million. It simply

illustrates how the COVID-19 pandemic has adverse effects on cancer healthcare globally, with characteristic struggles and challenges at institutions around the globe [19].

The Philippine Cancer Facts revealed that every year 3,500 Filipino children are determined to be diagnosed with cancer [10]. There has been a disruption in cancer care due to logistical, physical, and psychosocial reasons in the Philippines as a result of COVID-19 [46]. There is currently a growing issue as cancer has surpassed the COVID-19 virus, which was the fifth-leading cause of death in the Philippines, to take third place [7] [25].

Cancer healthcare services here in Mindanao, specifically in the Davao Region are constantly developing. Nevertheless, there is still considerable room for development with its current treatment modalities, healthcare systems, cancer facilities, its widespread affordability to the public, even the scarcity of oncology doctors, etc. There are over 41 identified licensed oncologists (Medical, Surgical, Radiation, and Gynecologic Oncologists) in Region XI catering to the total population of 5,243,536 Mindanaoans [2]. Most advanced clinics and cancer healthcare facilities are located in densely populated urban areas. The congested traffic of in-flow and out-flow of patients in healthcare institutions most especially in public hospitals has not helped the situation.

This research endeavor is largely influenced by two key hypotheses, specifically, the Terror Management Theory and the Hope Theory. The Hope Theory highlights the importance of hope as a necessary component and one of the coping techniques used by cancer patients to deal with their diagnosis [42]. Individuals with high hopes can conceptualize their goals, establishing goals that are informed by their past experiences. Assuring that cancer-stricken adolescents and their team (family or guardian) have the time to identify goals, raise their willpower, and develop viable options for achieving goals impedes their making progress and achieving cancer survival.

The Terror Management Hypothesis is another theory that deals with the delicate subject of mortality salience (TMT). According to Solomon et al. [15], our awareness of our mortality, or what they called our mortality salience, triggers psychological buffers in us to deal with the anxiety, worry, and dread that come with an awareness of our death. We commonly experience fear when faced with the inevitability of death, and this commonly leads to death anxiety, which is a persistent abnormal fear of death that the individual experiences. These psychological buffers include a cultural worldview, which is a collection of principles, standards, and values relevant to that culture, as well as self-esteem, which gives people a sense of worth.

Furthermore, amidst the worldwide pandemic, there is a rapidly developing cancer crisis that has been largely overshadowed by humanity's preoccupation with addressing the immediate challenges of the current outbreak. Unfortunately, the issue of cancer continues to affect a significant number of lives without receiving the attention it deserves. The present investigation highlights the urgent importance of addressing the concurrent cancer epidemic, even amidst the ongoing global pandemic, to protect the well-being of individuals battling cancer.

The researchers' goals and intentions were emphasized by answering the following questions throughout the conduct of this study.

1. During the treatment phase, what are the challenges in the lives of cancer-stricken adolescents in the pandemic new normal?
2. What are the immediate psychological, emotional, and behavioral repercussions of cancer treatment for cancer-stricken adolescents?
3. How do cancer-stricken adolescents cope with their oncological experience?

4. What are the valuable insights, realizations, and breakthroughs in the lives of cancer-stricken adolescents?

Finally, this case study aims to further investigate and illuminate the impact of these healthcare decisions on patients' care and outcomes in the locality of Davao Region. Thus, evidence-based approaches to cancer care can be developed for future cancer healthcare services.

METHODOLOGY

Participants

Participants in the study are teenage cancer patients (male or female) who were receiving chemotherapy treatment. During the COVID-19 pandemic, these patients have experienced extensive in-patient admissions in a facility that specializes in specific oncology cases with cancer pathologies. A total of eight participants were interviewed, with four (4) young cancer patients, specifically leukemia patients ages 12 to 18 years old, and four (4) trusted guardians/mothers to promote a trusting environment for the young participants.

Instrument

A semi-structured interview was conducted for the study, under its qualitative nature. A virtual interview made of open-ended questions precisely matched and tailored to the study's objectives. The research instrument was made in consideration of the research questions of the study, which were sent to the panel and validated by the experts.

Design and Procedure

In order to perform an investigation, this study used case study methodology and qualitative research techniques. According to Ravitch and Carl [36], qualitative research is a technique to learn about people's perspectives on the world and how their own experiences relate to what they have observed. According to Lucas et al. [24], case study research, as illustrated by the narratives, can provide significant information for the researchers conducting the study and beyond. Content analysis was used to analyze the narratives of the participants and derive themes.

RESULTS AND DISCUSSION

Challenges of Cancer-Stricken Adolescents in The Pandemic New Normal

This section presents the challenges faced by cancer patients in treatment-seeking amid the pandemic. Battling and outsmarting cancer has never been an easy process for cancer patients and with the added burden of the world pandemic. For cancer patients their narratives characterized three themes, namely (1) treatment and other medical services disruption; (2) reduced social support; and (3) increased contamination-related anxieties.

Table 1. Challenges Of Cancer-Stricken Adolescents In The Pandemic New Normal

- 1.1 Treatment and Other Medical Services Disruption
 - 1.2 Reduced Social Support
 - 1.3 Increased Contamination-Related Anxieties
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Treatment and other medical services disruption. The government-issued mandate has drawn the public toward the confines of their homes. Prior to the release and drug trial of covid vaccines, the only safety protocols employed were social distancing, wearing personal protective equipment (e.g. face shield, face mask, etc.), and home quarantine or isolation.

With these new norms, the patients have encountered disruption in their treatment-seeking and the medical services offered. The contraction of the virus has even halted the treatment of these young cancer patients as they have to be isolated and quarantined due to COVID infection.

Sophie mentioned how COVID-19 disrupted her medication in the following statement in the following passage. This was also evident and consistent in the four participants. In some cases there were even patients who contracted the virus, thus, ultimately ceasing all medical cancer treatment in light of the much more pressing infection. This has to be treated first prior to continuing the treatment as it could affect the immune system of the patient, rendering them weak and defenseless to aggressive chemotherapy drugs. In an objective medical stance, the disruption of medication and treatment may contribute to cancer relapse.

“Na postpone nung January na quarantine tas yung na COVID po ako” **(It got postponed last January and quarantine time because I got COVID)** [Sophie, LO9-LO10].

Chibs' mother stated how meticulous the hospital was in accepting patients just like Chibs resulting in an interruption in his medication. Admittedly, it was expressed by the patient's mother that seeking medical interventions and cancer treatment has been increasingly becoming difficult. The burden on the caregivers and the patient themselves are increasing due to the added medical procedures and protocols. This implies that the patients are in grave danger to exhausting their resources financially, physically, and logistically speaking.

“Everytime na mag Chemo tayo diba masyadong maarte na ang CCI sa protocols. Ang daming adjustments. Nong una kay okay ra prior na magpa chemo diha pa ka mag cbc. Pero ang sa karon na pandemic kinahanglan naa na kay naka ready na x-ray nimo and nag swab test na. **(Everytime that we have chemo the CCI is so meticulous with their protocols now. And actually, there are a lot of adjustments. At first it was okay to have your CBC simultaneously ate chemo schedule. But now in pandemic we should prepare x-ray and CBC)** [Chibs' Mother, LO404-LO416].

Apparently, aspects of life have been adversely affected by the COVID-19 pandemic outbreak. Further, a number of patients and their caregivers expressed frustration over COVID-19's perceived priority over their cancer-related symptoms which creates even more distress in them. Moreover, the findings are parallel with Edge et al. and Ting et al. [12] [47] who reported that routine cancer care services had been disrupted in a variety of ways for cancer patients actively seeking treatment and follow-up medical services. The pandemic has put a tremendous amount of strain on cancer services, causing disruptions mostly as a result of actions required to reduce patient virus exposure as well as pressures on health services resources [44].

Reduced Social Support. The pandemic has driven cancer patients further away from the public and their family relatives as the government has ordered policies and protocols to facilitate less socio-physical interaction. Though social distancing is not a new norm for the patients since right from the induction of the chemotherapy regimen patients are advised by their physician to refrain from public exposure as it poses a threat to their weakened immune system. This means less socialization and more prioritization of physical rehabilitation via social distancing. Healthcare institutions have reinforced one watcher per patient and no visitation hours. This has been deemed a veritable problem for cancer patients since social support during the treatment process is a crucial factor for these adolescent patients.

It is evident in the accounts of all the participants that the social support they get is crucial to their perceived well-being and overall life satisfaction. Despite the fact that they are accustomed to distancing themselves from others to prevent infection as they have a vulnerable immune system. However, due to COVID-19 pandemic restrictions, these interactions were further curtailed to the point of isolation from their immediate social support group. Which to them implicates a great disadvantage. Greyll stated that due to the pandemic during medication, he was separated from his brothers and neighbors.

"Separated mi po sa akoang brothers tapos sa amoang mga silingan nga kapamilya gihapon namo dugay mi na kauli." **(We were separated from my brothers after my diagnosis. My neighbors who are still family members, we've been together for a long time.)** [Greyll, LO1205-LO1209].

This experience by cancer patients is congruent with the findings of Lee et al. [22] who indicated that the pandemic had led to social distancing, consequently leading to reduced physical contact. Further, the detrimental effect of this reduced contact is particularly concerning for cancer patients, as per Cohen et al. [8] and Pinguat and Duberstein [34] who indicated that social support plays in decreasing stress and facilitating enhanced quality of life and survival of cancer patients.

These recent findings suggest a loophole in the healthcare system and its new normal policies. Social interaction must be abridged and considered with equivalent significance to the physiological and medical needs of patients. Although the utilization of advanced technology can bridge social connections, remote social contact cannot fully compensate for the person-to-person interaction effect, it does not extenuate loneliness in patients [23].

Furthermore, in the aforementioned theoretical foundation of this study, the hope theory and terror management theory suggest that social interaction is one key factor in the patient's survival. Social interaction cultivates problem-solving initiatives which in turn cultivates hope in cancer patients [9], thus, effectively reducing the anxiety caused by their mortality salience.

Increased Contamination Related Anxieties. Chemotherapy and many other forms of cancer therapy like radiotherapy, immunotherapy, targeted therapy, etc. are strict medical regimens with accompanying physical side effects on the body of the cancer patient. Chemo drugs for one do not discriminate in eliminating and killing the cells as it inevitably destroys cancer cells along with the healthy cells leaving the patient's immune system severely drained and weak. From the narratives, it can be deemed that the pandemic had induced **contamination-related anxieties**, a major concern of oncology cases as the presence of the virus threatens their health and cancer prognosis in general.

Most of the participants shared the same sentiment with their caregivers. Expressing how the pandemic has added up to their pre-existing worries. They know that an infection can have deleterious effects on their health and could even cause death. This adds up to their mortality salience. Miko's mother shared in the following statement how anxious she is about his son's health if face-to-face classes will be back soon as this poses an increased contamination risk.

"Siguro akong kagol-an kay inag face-to-face gyud. Kay daghan naman syag makasalimuha nga mga tao pero Ginoo na lay masayod gyud kay wala man gud ta kabalo sa panahon **(I think, what's sadly concerning me is the face to face because there will be a lot of people he will encounter**

but only God really knows, and I surrender it to him. Because we don't really know the times) [Miko's Mother, LO670-LO671]

“Nahadlok ko po tapos katong nabalhin nami sa Davao kay didto mas magdala nami ug katong dagko na alcohol para iwas covid” **(Ahm, I was scared after we moved to Davao because there we would bring more alcohol to avoid COVID-19)** [Greyl, LO69-LO74].

Further, the increase in anxiety amid the amid aligns with the findings of Cohen et al. [8] who indicated that contracting the COVID-19 virus is life-threatening for individuals diagnosed with chronic and pathological conditions because it compromises their immune systems. Hence, anxiety related to contracting the virus is expectedly elevated. Also, the findings are parallel with Ornell et al. and Pi et al. [4] [33], who indicated that amid the pandemic, anxiety and stress levels are increased due to fear of infection, while preexisting mental health conditions are exacerbated. Moreover, it is not uncommon for patients with common flu symptoms to suffer from mental distress and worsen their psychiatric symptoms as a result of similarity to COVID-19 symptoms. Their anxiety is further validated by the fact that they know that the longer their treatment is disrupted, the stronger the possibility of cancer relapse.

The Immediate Psychological, Emotional, and Behavioral Repercussion of Cancer Treatment

Cancer changes people. The affective plight of enduring a cancer treatment is more likely going to do more than just eliminate cancer cells in a patient's body. Its toxic and painful nature connotes a pathological experience for adolescent cancer patients. Nevertheless, the whole regiment will have to be followed strictly and religiously for the patient to survive. The participants and their primary caregivers have reported psychological, emotional, and behavioral consequences resulting from the cancer treatment interventions. The very core of these changes was attributed to the harsh conditions of their systemic treatment. The fragile nature of their bodies has led to a dynamic effect on their holistic state of being. From the narratives, the immediate repercussions included; (1) psychological disturbance, stress, and depression; (2) uncertainty and emotional distress; (3) stronger behavioral adherence to COVID-19 prevention measures; (4) increased gadget usage/gadget dependence, and; (5) decreased scholastic involvement.

Table 2. Immediate Psychological, Emotional, And Behavioral Repercussions Of The Cancer Treatment Toward The Cancer-Stricken Adolescents

- 2.1 Psychological Repercussions
 - 2.1.1 Psychological Disturbance, Stress, and Depression
 - 2.2 Emotional Repercussions
 - 2.2.1 Uncertainty and Emotional Distress
 - 2.3 Behavioral Repercussions
 - 2.3.1 Stronger Behavioral Adherence to COVID-19 Prevention Measures
 - 2.3.2 Increased Gadget Usage / Gadget Dependence
 - 2.3.3. Decreased Scholastic Involvement
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Psychological disturbance, stress, and depression. The participants described various ranges of negative thoughts during cancer treatment. These negative emotions and thoughts are loneliness, sadness, feelings of being alone, emptiness, and anxiousness about the future. Additionally, they described painful treatment procedures and side effects,

which were often portrayed and depicted as traumatic and disturbing. This has caused significant psychological distress to the young cancer patient.

The following statements of Miko's mother align with the literature's assumptions of disturbing, stressful, depressing, and relatively traumatic experiences in cancer treatment. This connotes that in spite of the advancement of medical innovations, still, patients and caregivers remain disconcerted and ambivalent with the whole regimen.

"Tinood jud kaayo maka buang gyud kay kung imong tinod on og dibdibon depression gyud" **(True, you will get depression if you really take it seriously)** [Miko's Mother, LO482-LO484].

All of the young cancer patients expressed fear, stress, and apprehension about the treatment whenever they receive chemotherapy. This was also shared and confirmed by Chibs' mother, among the many procedures his son experienced, the blood transfusion was particularly disturbing for her son. Moreover, Greyll's mother stated that there was an instance of psychological breakdown experienced by his son which happened during his cannulation due to his painful treatment.

"Ana jud siya nga ma bahalag mamatay ko ma dili nako ma maluoy ka nako ma sakit na kaayo ma nag antos nako ug taman" **(We are in the infusion room, and he told me that he does not care if he's going to die. He just wants this to stop and he begged me because he's in so much pain and suffering)** [Greyll's Mother, LO1025-LO1029].

Similarly, Chibs shared the same sentiment of fear and apprehension with his treatment. Explicitly pointing out his painful experience during the chemotherapy procedure. It was also told that his fear of blood was extremely debilitating to him that it hindered his blood transfusion sessions as the sight of blood make him very restless and throws feats of tantrums. Moreover, Chibs' mother narrated a brief experience of her son which contributed to his treatment distress and disturbance.

"Nagkaroon siya ng trauma sa BMA tung katong time na ginakuhaan na siya sa ano sa iyahang likod kaso walay makita dili gyud sila maka-suction ug kuan ug dugo. Nagstart sila ug like siguro 5cc tapos nisaka sila ug 10cc, 20cc hantud sa pinaka dako gyud na syringe na katong bakal. Unya pirti gyung sakita **(He had a trauma with the BMA because there was a time when he had an extraction procedure in his back, and they could not suction any blood. They started and like maybe 5cc then they went up and 10cc, 20cc until they used the biggest steel syringe. It was very painful)** [Chibs' Mother, LO610-LO614].

A cancer patient's emotional disturbance, such as anxiety or depression, is considered to be the sixth vital sign along with signs of respiration, temperature, blood pressure, heart rate, and pain [27] [43]. People with cancer often experience emotional difficulties, which negatively impact treatment adherence and lead to a higher mortality rate. According to the meta-analysis depicted in the study by Hengwen Sun [43] and his colleagues, there was a huge estimate of cancer patients experience some level of psychological distress during active treatment, and emotional distress disturbance was negatively associated with age.

Uncertainty and emotional distress. The patients have manifested cancer-related emotional distress due to the uncertainty and ambiguity of the treatment. Feelings of loneliness, irritation, and anxiousness are some of the negative emotions experienced by the

patients about their diagnosis and treatment. Which makes the treatment experience all the more emotionally challenging for adolescent cancer patients. The unpredictability of the treatment process, outcomes, and accompanying discomfort cultivates emotional distress and affective reactions in the patients.

It is apparent in the cases of all the patients that their cancer diagnosis has elicited uncertainty in their lives which in turn contributed to their distress. Sophie mentioned being emotionally affected by her chemotherapy treatment. Her inhibition towards seeking treatment often puts her in a crying feat.

“Paglabas ko po sa ospital hindi ko pa talaga na-understand kung ano. Tapos gi-explain ni mama tas yun nag-iyak na ako na ayaw ko lagi. Tas may times din nap ag mag tusok gud tapos ayaw ko magpunta. Tapos parang ma-force na ako noon” **(When I came out of the hospital I didn't really understand what's happening. Then mama explained that I have cancer and I was already crying that I didn't want to have it. There are also times when I don't want to go to the hospital because the injections sting a lot. It was like I was being forced to receive the treatment)** [Sophie, LO585-LO591].

Chibs experienced mood disturbances during his treatment. Akin to this phenomenon, Chib's mother noticed changes in her son's attitude which according to her completely changed after receiving the cancer treatment. Implying that she cannot fathom his son's attitude and demeanor, especially when he is heavily medicated.

“Kanang irritable sila. Siya kay naga-mixed kuan siya mixed na ang iyang attitude. Naglahi gyud ang iyang attitude. So kadto. Oo tama ka sa steroids mao gyud na siya.” **(They're irritable because he has mixed attitude. His attitude was very different. Yes, that was it, you're right. It was because of the steroids.)** [Chibs' Mother, LO857-LO873].

A significant negative consequence of a cancer diagnosis and treatment is cancer-related distress due to uncertainty, which is characterized by intense unpleasant emotions that interfere with daily living conditions [38]. During and after cancer treatment, patients may experience a variety of side effects from chemotherapy, including discomfort, anxiety, and fatigue which contributes inadvertently to the sleep patterns of patients and their affectual moods [28] [51] [48].

Stronger behavioral adherence to COVID-19 prevention measures. Cancer patients are much more predisposed to stronger behavioral adherence to COVID-19 prevention measures. These safeguarding protocols include social distancing, wearing protective equipment (e.g., face mask, face shield, PPEs, etc.), practicing hygienic sanitation, and staying in the confines of their homes. these behaviors are driven by the cancer patients' need to extenuate the lingering apprehension and fear of the virus. Eliminating possible sources of cross-infection and health risk contact will contribute to an easy and efficient clinic-to-home transition in the patients' lives. Thus, sparing them the compromise of having to deal with an untoward infection and more time for prioritizing treatment comfort.

Every parent of the young patients stated that they had grown significantly more vigilant about their children's well-being after the diagnosis, and this protectiveness intensified even further during the pandemic. Miko's mother mentioned that she noticed changes in her behavior, becoming more watchful and cautious when it came to her son's interactions.

“Conservative nako sa iyaha ba kumabaga kung asa siya molakaw pangita na nako siya like dili na nako siya basta basta pasagdaan iyahang kinabuhi karon nga naa nay cancer” **(I have become more conservative when I deal with him-for instance, if he goes out, I look for him; I don't let my guard down now that he has cancer)** [Miko's Mother, LO150-LO156].

Likewise, in Greyll's case, his social distancing practices were reinforced under his parents' supervision. He has to maintain a good distance from possible virus contaminants and sources as stated by his mother. Most of the patients expressed that they are inevitably rendered vigilant to the health procedures due to the susceptibility of their health and immune system to infection.

All of the participants reported increased compliance with COVID restrictions. Being proactive and compliant with these measures gives the patient and their caregiver a good sense of self-efficacy and a grasp of things. In comparison with the non-cancer population, cancer-affected individuals pay close adherence to the recommended distance when going out [20] [14] [40].

Increased gadget usage / Gadget dependence. All throughout the span and longevity of the cancer treatment. Patients are generally unable to perform complex tasks and activities involving physical exertion as their body is rendered weak and fragile during chemotherapy. Cancer treatment protocols usually last at least two or more years depending on if the treatment was continuously administered without interruption. The patient routine involves staying at the hospital for treatment admissions, making out-patient treatment and clinic visits, and then resting at home for the next follow-up treatment and consultation. Moreover, this creates a gap in the means of entertainment for patients to fend off boredom. The gadgets like smartphones and iPad provide just the right distraction and source of leisure without having to deal with the physical demands that would burden their body.

Miko spoke about the significant amount of time he devotes to gaming activities using his smartphone gadget. This was also apparent in Chibs as spoken by his mother. Stating that his son seems to have a fixation on his gadget and gaming activities. According to her, Chibs seems to have his own world whenever he uses his gadget. Her mother even stated that Chibs' gadget fixation led to frequent online gaming for a prolonged time early in the morning. This, however, could lead to adverse health implications.

“Ano siya loner siya, gusto niya naa siyay sariling mundo siya lang na mao nang ang makahappy sa iyaha ang ML. Sila lang gyud na sa Mobile Legends ang makahappy sa ilaha” **(In my observation he's like. He's like a loner, he likes to have his own world in which he is alone and that is why ML makes him happy. It's just the two of them because ML makes him happy.)** [Chibs' Mother, LO805-LO810].

Young cancer patients tend to resort to gadget usage as compensation for the forfeited physical activities due to treatment. Indulgence in mobile games is the most convenient activity for young cancer patients. Children aged 8 to 18 were separated from their peers during hospitalization due to environmental changes and limitations; they were unable to pursue hobbies and had trouble meeting their social needs. Consequently, these children mainly entertained themselves with mobile games [45]. As a result of the prolonged use of electronics and participation in mobile games, the children were unable to interact properly with others, resulting in a decrease in social skills development.

Decreased scholastic involvement. The cancer treatment intervention does not necessarily situate at the hospital. In fact, the transition from in-patient hospital drug administration is generally included and incorporated in the cancer treatment protocol. Out-patient medications (e.g., steroids, antibiotics, chemo injectables, etc.) are given to patients for home administration. This leaves an ample amount of time for patients to rest and recover from the effects of the treatment. Consequently, patients will have less time and resources to prioritize their education. As patients will have to deal with the chemotherapy side effects like nausea, loss of appetite, sore mouth, body fatigue, infections, muscle aches, temperature problems, and so on due to undergoing treatment and medication. Thus, resulting in decreased scholastic involvement and academic performance.

Sophie mentioned having lower grades after she started receiving chemotherapy treatment due to less school participation. She admitted that she cannot keep up with their class discussions which makes it difficult for her to understand their lessons.

“Ngayon kay naga baba ang grades ko napansin ko lang. Ahh, basta nagbaba yung grades ko kasi hindi ako makasabay sa lessons tapos hindi ko ma-understand yung mga tasks” **(Now my grades are decreasing I just noticed. My grades are decreasing because I can't keep up with the lessons and then I can't understand the tasks)** [Sophie, LO522-LO526]

It was even told by Sophie's mother that her daughter's teachers were more lenient to her due to her cancer affliction. They do not necessarily force her to do all the laborious learning tasks and activities. In Miko's case, his school participation has decreased due to treatment and parental restrictions as his body is very sensitive to contaminants in the surrounding. It was necessary for him to cut some social and scholastic interactions during his chemotherapy treatment.

All of the four (4) patients reported decreased scholastic involvement and performance. This was due to body weakness, a side effect of cancer treatment. They either have to forfeit or stall their education to prioritize their chemotherapy regimen and recuperate from it. Chibs' mother believed that the school stress is another factor that she wants to rule out as they tried to do homeschooling but have only managed to have three cancer relapse out of it.

As treatment protocols are specifically made to cater to the pathological needs of the young patients' physiology, it is not conducive to accommodating their educational learning needs. The repeated hospitalizations forced children with leukemia aged 8-18 years to leave school or take time off, which hampered their ability to attend school normally [45] [30]. Their academic performance declined due to reduced study time. Children also felt distressed and worried about the profound effects on their future studies caused by their reduced communication and interactions with teachers and classmates.

Coping Mechanisms of Cancer-Stricken Adolescents

A cancer diagnosis has a variety of effects on a person's life. It encompasses far more than just how people perceive it to be a near certainty. When in reality we are all bound for the same outcome. This section presents how cancer-stricken adolescents cope with their diagnosis and affliction in the scope of the phenomenal continuum. How they employ active coping strategies through engaging activities, promote positive mindsets, eventually increase their awareness and acceptance of their oncological situation, and rely on strong social and spiritual support amidst a pandemic. As cancer patients attempt to move past their treatment and diagnosis during this period of coping and life transition, it is crucial to consider their distinctive and unique cases. Coping mechanisms, they employed include (1) active coping

strategies via engaging activities; (2) awareness and acceptance of the current situation; (3) strong social and spiritual support, and; (4) positive and active mind setting.

Table 3. Coping Mechanisms Of Cancer-Stricken Adolescents

3.1 Active Coping Strategies via Engaging Activities

3.2 Positive and Active Mind Setting

3.3 Awareness and Acceptance of the Current Situation

3.4 Strong Social and Spiritual Support

Active Coping Strategies via Engaging Activities. Cancer patients' daily problems have existed for a very long time as a result of the side effects of their treatments. Unfortunately, the pandemic adds to the pain they have already endured because of the limitations and restrictions that have been imposed. Activities that were still possible prior to the pandemic have been severely limited. For some participants, using self-distraction keeps them "busy" and keeps them from thinking about their condition, thus improving their ability to cope.

All the young patients have implied that having things to do aside from thinking of their affliction alone helps with their anxieties and frustrations. Sophie's mother mentioned the following activities her daughter does to herself from thinking about her condition.

"She keeps herself busy. Mag Tiktok siya, magplay siya ug instruments, sa kdrama na siyay gina follow na kdrama episode karon. Play oo, sa hospital while gina chemo siya hantud sa makatulog siya. **(She does a lot of things. She keeps herself busy. She will do Tiktok, she will play instruments, and she's also following kdrama episodes now. She plays with phone, when she's in the hospital while undergoing chemotherapy she plays until she falls asleep)** [Sophie's Mother, LO737-LO744].

It can be difficult for cancer patients to deal with their illness and treatment because of this extended isolation which can lead to sadness, loneliness, and worry [50]. Despite already having several restrictions upon them, some participants hope for some sense of normalcy throughout their daily lives on a daily basis to find ways to stay active. As shown in a recent report, people who improved or maintained their levels of movement throughout the pandemic did so to preserve their mental health [26]. Some individuals engage in physical activities like sports that exercise their bodies. There is growing evidence to suggest that exercise can help people cope with the side effects of cancer, its treatment, and other behavioral health issues such as anxiety, sadness, exhaustion, and sleep issues [1]. In addition, studies have indicated that engaging in physical activity following a cancer diagnosis enhances immune responses, fatigue, sleep, and general quality of life [5].

Positive and Active Mind Setting. Cancer is not only heartbreaking news for those who have been diagnosed with it; it is also a life-threatening and life-changing condition that can have devastating impacts on many people. Minding all those detrimental impacts is unavoidable. The good news of this study is that it showed that everyone who participated seemed to have a positive outlook on their struggle with cancer.

Greyll shared that he does not allow himself to be affected by being too emotional and getting depressed. For him knowing what to ignore and what to focus on is much more important. A classic psychological buffer in the TMT theory protects his esteem from mortality salience or the awareness of his own death.

"Wala ako nagpadala like sa emotions nila mama ug sa iyahang mga sisters kay kung magpadala ko po kay ma depress lang man ko kanang murag wala siya'y benefit sa akoo. **(I did not get swayed with the emotions of my mother and her sisters, because if I let it get to me I'll just get depressed. It will not benefit me.)** [Grel, LO1114-LO1119].

The young cancer patients reported that rather than focusing on their affliction, they try to divert their attention to other things and possibilities. This in return gives them comfort and hope of what's to come beyond their cancer diagnosis and treatment. Sophie's mother expressed how her daughter emotionally handled her situation by being a proactive and conscious motivator to herself.

"Self-motivation. Unya as much as possible she stays motivated. She's positive. Unya kana, dili siya naga entertain ug mga negative thoughts about sa iyahang sakit. Hopeful attitude. Yes po na maayo siya." **(Self-motivation. And as much as possible she stays motivated. She's positive. And she does not entertain negative thoughts about her disease. She's got hopeful attitude. That she'll get better someday. That's just her way.)** [Sophie's Mother, LO792-LO802].

Cancer patients believe that allowing stress to control them can only result in devastating repercussions, both physically and psychologically. This finding concurs with other research, which has found that positive psychological reactions can improve a patient's quality of life, whereas negative reactions can have the opposite effect [16]. During the interview, it was mentioned that stress is one of the reasons why cancer patients die. Although the absolute effect of stress on cancer is unclear, the research showed that reducing stress may very well increase the likelihood of recovery, enhance the quality of life, and allow for more engagement in the entire course of treatment [13]. Similarly, a study reported that positive thinking encouraged patients with chronic diseases to showcase positive and problem-focused coping styles more than other coping styles. Participants who may be more likely to employ unhealthy coping mechanisms may profit from further psychological assistance [11].

Awareness and Acceptance of the Current Situation. In general, those who were given a cancer diagnosis found it difficult to accept their current situation. Particularly in adjusting to their stressful circumstances, such as side effects from therapy, restricted physical activity, and other constraints. However, the participants of the study showed how acceptance helps them move on, cope with their situation, and motivates a positive outlook in life. In fact, most of them accepted their current situation.

Young cancer patients were distressed upon knowing their diagnosis, however, they also mentioned that having to come to terms with their affliction is one key component to moving forward. Sophie stated that she accepted her condition in order for her to feel well.

"Gi-accept ko na lang po, in order to feel well kay wala na kay I accept it man. **(I just accepted it in order to feel well, because I already acknowledged it [cancer])** [Sophie, LO770-LO774].

Thus, emphasizing the relevance of hope (hope theory) in which the acceptance of their disease became the catalyst for positive coping and life pathfinding. Knowing their limitations and possibilities helps with visualizing their next moves and goals in life.

People typically find optimism once they realize that they have cancer. However, holding onto hope and internalizing acceptance is a necessary process as it has been long

recognized that it plays a critical role in psychological adjustment to the illness [35] [39]. Cancer patient's awareness and acceptance of a life-threatening illness appears to be key target in interventions to lessen general and cancer-specific discomfort and coping in cancer patients [39]. Furthermore, a lot of cancer participants stressed the importance of accepting their conditions [31].

Strong Social and Spiritual Support. The cancer patient's support system plays a pivotal role in the cancer-fighting process. But due to pandemic restrictions, cancer patients have been driven further away from physical interactions. This is where constant and close contact support for the patient's needs is critical.

Miko's mother stated that the spiritual and financial support they received makes them feel empowered despite their situation. Moreover, she expressed that she supported his son's condition in a way that won't make his son feel weakened by his condition.

"Pagkahibalo niya nga naa syay sakit nga cancer sa akong tan-aw sa iya dili pa niya totally na sabtan ba kung unsay cancer nga mao tong nasabtan na niya nya ako pud suport ra pud ko kung unsay maayo nga pamaraan para sa iyaha pero ingonn nga magpakita ka og kaluya tungod sa iyang sitwasyon kay murag wa pud koy gibuhay kay para dili pud siya maluya. **(When he found out that he had cancer, I looked at him and it seemed like he didn't totally understand what cancer was, but when he already understood, I just supported what will be the best medication for him, but as if you are showing weakness because of his situation? it looks like I didn't do anything so that he wouldn't be weak again)** [Miko's Mother, LO346-LO353].

Moreover, the patients and their mothers confirmed that having people that root for their well-being spiritually and financially made them feel empowered.

"Kato nga time kay na kaloy an lang gyud mi ba nga supportive kaayo ang tanan sa among sitwasyon mao tong nakaya pud ang tanan. Mao lang gyud to akong nakita nga miskan kinsang tao naga suporta gyud spiritually, financially kumbaga tanan ba walay kahuyang nga nabati." **(At that time, we were just blessed to have supportive people at our situation, so we endured everything. That's what I realized: there are people who will support you spiritually, financially- and [because of that], we didn't feel that we were vulnerable)** [Miko's Mother, LO597-LO603].

Cancer patients' positive outlook on life reflects the way people support them all throughout their journey. The findings align with Guo et al. [16] who indicated that strong social support is crucial for cancer patients because it motivates them to pursue anti-cancer steps and become more positive in seeing their treatment journey. It also aligns with Nira et al. [32] who indicated that the psychological state of cancer patient scans is assisted by family support, which is always received in the form of gratitude, presence, and motivation, to keep them happy about receiving chemotherapy. Support from the family will help the patient feel more confident about their recovery from chemotherapy [29] [41].

Insights, Realizations, and Breakthroughs In The Lives of Cancer-Stricken Adolescents

The hematologic oncology treatment and medication is a grueling and arduous journey for cancer patients. Each cancer case presents unique phenomena of treatment scenarios that have engendered certain insights, breakthroughs, and realizations in cancer patients and

their immediate guardians. These realizations are predisposed towards aggravating cancer healthcare access to services and assistance, and the concern for the extenuation of psychological treatment repercussions. The analysis of the narratives includes (1) the need for better access to cancer-related services and assistance, and (2) the call for more psychological health intervention programs.

Table 4. Insights, Realizations, And Breakthroughs In The Lives Of Cancer-Stricken Adolescents

4.1 The Need For Better Access To Cancer-Related Services And Assistance

4.2 The Call For More Psychological Health Intervention Programs

The need for better access to cancer-related services and assistance. The availability of financial and medical services to cater the oncological cases is a major concern for young cancer patients. Here in the Philippines, cancer healthcare services are still subject to improvements and appropriation to the needs of cancer patients. In the lives of young cancer patients, their guardians are much more burdened by the financial struggle and treatment maintenance. Cancer treatment is extremely expensive and as per the patients' experience, government assistance for cancer patients is time-limited and finite. The participants have stated that cash assistance and subsidies given by health institutions for example can only be claimed every three months until one can reapply for another. However, this has a big impact on the patients as common chemotherapy treatment cycles happen at weekly or monthly intervals. They would have to find more sources of financial support and personal monetary backup to rely on. Other concerns like securing blood and platelet units for their patient's transfusion use were also expressed by the participants.

Chibs' mother admitted that they have no health providers and insurance benefits. They only rely on government subsidies and non-government organizations' (NGO's) financial assistance to sustain treatment. She also emphasized her struggle when it comes to accessing blood for frequent blood transfusions of her son which is vital for his survival. Similarly, Greyll's mother stated that financial healthcare assistance is one factor mediating the access of cancer patients to seek appropriate treatment.

"Wala man mi health provider like sa insurance. Nag relay lang ko sa philhealth tsaka malasakit center. More on mag focus jud ko sa blood. Like lisud kaau maka secure ug blood for cancer patients. Kana akong wish nga maka access mi. Or maka access Ang ubang cancer patients kid" **(We don't even have a health provider like insurance. I just relayed to the philhealth and care center. I focus more on blood. Like it's hard to secure blood for cancer patients. That's my wish we could access. Or access cancer patients kid can access it)** [Chibs' Mother, LO1423-LO1427].

According to Greyll's mother, it was imperative to provide sustainable healthcare assistance to these cancer cases. **All of the participant's mothers expressed that the pre-existing government aid is lacking scope and reach in the extensive timeline of cancer care.**

"The better thing that the government can do for the cancer patients is to allocate more funds for them and make sure that the funds intended for them has sustainability. Dili lang mahatagan ta karon ug tabang. Then after three months pa ta pwede napud makapangayo. Let's change some policies of some agencies who are extending financial assistance to these people.

Pobre na lisud lisuron pa” **(The better thing that the government can do for the cancer patients is to allocate more funds for them and make sure that the funds intended for them have sustainability. We just can’t help now and then wait for three months until one can ask for assistance again. Let’s change some policies of some agencies that are extending financial assistance to these people. Let’s refrain from giving a hard time to poor people)** [Greyll’s Mother, LO1682-LO1687].

In contrast, Sophie’s mother shared equally alike opinions about fortifying government cancer treatment assistance to foster wellness among the cancer population.

Financial and geographical access to cancer healthcare services is of significant concern for young cancer patients and their families as advanced cancer facilities are situated in the urban and costly suburbs [17]. Aside from the general cost of having to seek treatment in a city, cancer drugs, and financial toxicity is a veritable problem that causes a disproportionate struggle towards the patient’s finite resources and concomitant health services [6] [37]. As cancer care and medication cost rise so as the barriers to seeking appropriate treatment services like the lack of resources, the lack of knowledge of the available resources, the difficulty to access financial assistance, and the superficial barrier of communication and language literacy barriers.

The call for more psychological health intervention programs. The pathological experience of cancer diagnosis, treatment, and survival is a psychologically challenging endeavor for cancer patients. For young cancer patients, it is of great significance to establish and maintain good psychological health as it plays a crucial factor in their future cancer prognosis. The patients and their caregivers have expressed concerns and issues pertaining to their mental health which necessitates proper conduct of mental health interventions.

It was explicitly stated by Sophie’s mother that the exceedingly overwhelming side effects and burden of cancer affliction and treatment unquestionably necessitate the formulation of comprehensive psycho-oncology services to counter the cancer ramifications.

“Ang bisan unsang porma sa suporta sama sa sikolohikal ug emosyonal nga mga processes nga makapataas sa emosyon sa akong anak nga babaye kay dako kaayong tabang sa pag-siguro nga ang mga sesyon sa chemotherapy is makaya niya” **(Any forms of support like psychological and emotional processes that can uplift the emotion of my daughter is highly appreciated and ensure that the chemotherapy sessions will be sustained.)** [Sophie’s Mother, LO1122-LO1126].

In the aforementioned sections, it was explicitly depicted by the young cancer patients and their mothers how the treatment has caused a substantial burden in their lives. This implies that more than their physical and financial needs, their psychological health also warrants a great variable in their overall well-being which needs to be looked into and further pursued.

The high burden of medical and psychiatric symptoms is an aggravating facet of cancer care due to its complexity and ambiguity to the patients [18]. There are many physical and psychological problems associated with cancer and its medical treatments. This includes a wide range of problems that have a profound impact on quality of life, such as physical pain, fatigue, and loss of autonomy as well as anxiety, depression, and strain on personal relationships [52] [3] [21]. The division and inherent disconnect between oncological care

and psychological interventions remain contributing factors to the most challenging disease of cancer in the diagnostic, therapeutic, and psycho-socio-cultural-economic domains.

CONCLUSIONS

This current research endeavor has yielded a significant and potent body of knowledge and experiences as it traversed the delicate cases or narratives of young teenage leukemia cancer patients. The insights and breakthroughs that were unraveled in the study treaded different dimensions in the cases particularly the personal, social, clinical, and societal spheres of cancer-stricken adolescents. Found some internal systems perpetuating throughout their existence making their current situation seem like a dot of outcome to the greater chasm or system that ultimately dictates and exploits their lives.

The first thematic findings in relevance to the present world pandemic have produced patients' personal accounts regarding medical treatment disruption, reduced social support, and contamination anxieties implying how the healthcare institutions and the government has been overwhelmed by the COVID-19 virus which has cascaded a dynamic effect onto their services. Despite the superficial solutions created to counter the virus, cancer mortality rates are still well above COVID, and with the participant's statements, seeking treatment nowadays has been painstakingly difficult, especially for patients in public institutions, this should be looked further into.

Ironically, cancer treatments are supposed to be as wholesome as possible in the sense that healthcare's priority is to provide a holistic medication that's less invasive and more beneficial to the patient. However, young cancer patients and parents still account for the psychological, emotional, and behavioral repercussions of the treatment. Our healthcare sector must reevaluate its stance in making the treatment benefits outweigh the risks it poses for cancer patients, especially the younger ones. It was both explicitly and implicitly expressed by the patients the significant struggle they encounter during treatment. To put forth health safeguards specific to the patient's case with specified plans, interventions, and alternatives cataloging the steps (e.g., counteracting treatment distress, emotional crisis interventions, cognitive-behavioral therapies) the patient must holistically go through along with their cancer treatment as a form of individualized holistic medical plan to further harness good clinical prognosis.

In caveat to that, it was expressed by the patients that coping through engaging activities, a positive mind setting and cancer affliction acceptance were effective in dealing with the negative side effects of cancer treatment. These are the matters that the healthcare providers should reinforce by seeing how these things are not necessarily paired with the treatment. When patients seek cancer treatment, most of the services offered are physiologically centered leaving so many gray areas as to how they and their family should cope with their cancer affliction. Oncology clinics should also be equipped with mental healthcare units like psychology consultants specializing in crisis intervention techniques, individual, child, and family counselors, wellness coaches and etc.

The final theme which tackles the realizations in the lives of cancer-stricken adolescents implicated that the formation and further conceptualization of more inclusive and sustainable healthcare services is a critical factor to help facilitate better cancer prognosis and successful remission in these young cancer patients. The patient's parent's revelation of the scarcity and difficulty to access financial assistance offered to patients is a case a veritable issue that necessitates further investigation. And the most crucial parcel of knowledge is it should be the priority of healthcare providers to provide a much more holistic approach to treating cancer and mitigate the risk of these invasive medical procedures. It is expressed by

the parents that there should be psychological interventions alongside conventional cancer treatment to help their children cope with their affliction. By fortifying the practice of psycho-oncology and bridging its inherent fragmentation.

DEFINITION OF TERMS

Chemotherapy - is a drug treatment that uses powerful chemicals to kill fast-growing cells in your body.

Relapse – is when cancer returns after a period of remission, it's considered a recurrence.

Remission – is a decrease in or disappearance of signs and symptoms of cancer.

Leukemia - is a type of cancer found in your blood and bone marrow and is caused by the rapid production of abnormal white blood cells.

Cannulation - is a technique in which a cannula is placed inside a vein to provide venous access.

Intrathecal (IT) Chemotherapy – a treatment in which anticancer drugs are injected into the fluid-filled space between the thin layers of tissue that cover the brain and spinal cord.

Intravenous (IV) Chemotherapy - a type of chemotherapy delivered with an IV inserted in a large vein, usually in the arm, hand, or chest.

Bone Marrow Aspiration (BMA) - a procedure in which a small sample of bone marrow is removed, usually from the hip bone, breastbone, or thigh bone.

Blood Transfusion – is a routine medical procedure in which donated blood is provided to you through a narrow tube placed within a vein in your arm.

Complete Blood Count (CBC) - is a blood test that identifies and counts the 7 types of cells found in the blood.

PhilHealth – a tax-exempt, government-owned, and controlled corporation of the Philippines created to deliver universal health insurance coverage for all Filipinos.

Malasakit Center - a chain of one-stop-shop centers for medical and financial assistance provided by various agencies of the Philippine government.

Hematology - is the study of blood and blood disorders.

Oncology - is the study of cancer.

Psycho-Oncology - deals with psychological reactions, behavioral components, changes, and the social factors to the experience of cancer.

Mortality Salience - is the awareness by individuals that their death is inevitable.

ETHICAL APPROVAL

Ethics were appropriately observed in this study. Keeping participants' interests and researchers' boundaries in mind. A number of ethical considerations have been considered in this research, including voluntary participation, privacy, confidentiality, informed consent, risks, benefits, fabrication, falsification, and authorship.

CONSENT

The author sought and received approval from their respective respondents. The informed consent form, assent form, signature, and documentation have all been completed prior to the conduct of the study.

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COMPETING INTERESTS

The authors have declared that no competing interests exist.

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