



## Financial literacy and quality of life amongst cancer patients in Sri Lanka

**D.M.R. Dissanayake**

University of Kelaniya

### ABSTRACT

**Purpose:** The quality of life has been widely examined by social science researchers with reference to different lifestyle-related issues of people across the world. It has made an eye-opening contribution by many authors educating the importance of quality of life for patients suffering from different diseases including cancers as one of the critical scopes. Alongside this, this study aimed to examine how financial literacy and social support could impact the quality of life of cancer patients in Sri Lanka with a rationale for its social and community impacts.

**Design/methodology/approach:** The variable of financial distress was considered the main independent variable within the scope of financial literacy to examine its influence on the quality of life of cancer patients. Additionally, this study investigated how social support influences the quality of life of cancer patients supported by empirical evidence. It followed a quantitative research method in line with the required inclusions for an acceptable methodology. Respondents were selected for the survey with a questionnaire followed by a convenient sampling method. The final analysis was limited to 187 respondents due to the incompleteness of the questionnaires filled in by the sample units. The hypotheses were tested by using the CB-SEM model supported by Amos-23 software and the descriptive analysis was executed by using the SPSS-21 package.

**Findings:** The main findings of the study were discussed in the article in line with the two hypotheses tested. In brief, results proved that financial distress (FD) has a significant impact on the quality of life (QoL) of cancer patients. Additionally, it has tested the hypotheses related to how social support (SS) impacts on quality of life (QoL) of cancer patients. The results verified that social support experienced by cancer patients significantly influences the quality of life of cancer patients.

**Originality:** The cancer patients in Sri Lanka should be supported by a holistic approach besides the treatments. Alongside this, this paper contributes new knowledge of examining how the quality of life of cancer patients has been influenced by financial distress and social support in line with the empirical and practice gaps noticed. In addition, this study contributes to the main scopes mentioned by sustainable development goals (SDG) with reference to the local context as it provides new knowledge for social and community-related issues.

**Implications:** The findings of the study could be used by the health sector authorities and social welfare service organizations to come up with policies and programs to make life better for cancer patients in terms of financial and social aspects.

**Keywords:** Quality of Life, Financial Literacy, Financial Distress, Social Support, Sri Lanka

## INTRODUCTION

Financial literacy and quality of life have been researched in many countries with reference to different consumer contexts. The relationship between financial literacy and how it does affect people's behaviours is a critically important matter in terms of social, economic and psychological perspectives (Lusardi and Mitchell 2014; Shim, Barber et al. 2010). Empirical studies highlight the need to investigate the financial literacy of people affected by different social, physical and psychological unrests based on the depth of its association with human life. Sri Lanka is a country which is driven by acceptable levels of social indexes including education and health compared to regional countries. However, increasing issues are reported in terms of non-communicable diseases like cancers (Jayarajah, Nagodavithane, Basnayake, Seneviratne, 2019). The overall impact of such patients and their families has been less examined other than health factor studies which have led to a knowledge gap for social and economic policy to be made for such communities. Studies are highlighting how such people suffering from illnesses like cancer would make holistic issues to their close communities including family members due to economic and social pressures. The quality of life of patients is an important matter other than the health treatments (Lusardi 2012; Stolper & Walter 2017). There are challenges faced by such cancer patients due to expensive treatment costs, mental pressures and social issues which lead to many social issues. The issues faced by cancer patients in Sri Lanka should be closely examined other than health-related matters to find avenues for improving the quality of life. Patients and their families become clueless about other regular matters related to life when a family member gets affected by such diseases (Shim, Barber et al. 2010). The lack of knowledge of financial literacy may lead to many issues by intensifying the issues faced by cancer patients which creates unrest for families. The social and welfare aspects of cancer patients need to be carefully managed to maintain the psychological well-being of them and their family members.

The empirical gaps have been found mentioning the need of investigating how financial literacy and quality of life are interconnected concerning people affected by different personal, social and community issues. The factors related to quality of life have been investigated by previous authors with different scales and measures. It finds special attention made to how financial literacy affects on quality of life amongst cancer patients depending on the level of mental pressures, economic pressures and social pressures bared by patients and their family members (Lusardi 2012; Stolper & Walter 2017).

In today's world, financial literacy is considered a critical life skill (Lusardi 2012, Lusardi and Mitchell 2014). However, many people all around the world lack opportunities for acquiring this essential knowledge (Bodie 2006). The National Foundation for Educational Research defines financial literacy as the ability to make effective decisions regarding the use and management of money (Schagen and Lines 2019). Financial literacy is a broad concept about a wide range of topics, from understanding novel and sophisticated financial products to managing basic everyday economic decisions (Stolper and Walter 2017). A growing body of research has

demonstrated that financial literacy is linked to life satisfaction, physical and psychological well-being, as well as quality of life (Garman, Leech et al. 1996, Volpe, Chen et al. 2006, Xiao, Tang et al. 2009, Shim, Barber et al. 2010). In contemporary health literature and oncology research, well-being is defined as quality of life (QoL). Among cancer patients, QoL is a self-assessed subjective well-being based on the individuals' perception of their ability to cope with the personal, social and financial burden of their disease. Thus, given the increasing global cancer incidence, it seems critical to identify how financial literacy could potentially improve the patient's QoL. Moreover, direct (medical) and indirect (non-medical) cancer treatment expenses would be a type of financial burden for the patients and their families. Therefore, it expects that financial literacy allows individuals to allocate their income to appropriate financial tools that can be utilized in times of need (Shim, Barber et al. 2010).

### **Problem Statement**

Most cancer survivors and their caregivers report that cancer care providers have failed to address patients' psychological needs and their quality of life has tremendously diminished (Adler & Page 2008). Upon receiving a cancer diagnosis, patients and their families experience a great amount of stress and worry. Permanent health impairment, inability to function in social roles or perform daily activities, as well as high cost of medical treatment, inflict emotional distress, often resulting in mental health problems, which can lead to social issues and even job loss (Gubler and Pierce, 2014). Therefore, it is important to minimize the negative outcomes caused by cancers including quality of life-related issues.

Moreover, cancer treatment incurs significant direct (medical) and indirect (nonmedical) expenses for the patients (Sherman, Pfister et al. 2001). Direct medical costs are expenses related to health services, such as doctors' visits, medicines, as well as inpatient and outpatient surveillance. Indirect (nonmedical) costs, on the other hand, include expenses related to travel to health centres, as well as loss of long-term employment (McNulty & Khera 2015), both of which would be a type of financial burden for the patients and their families. In addition, social support is another main variable attributed to the behaviour of patients. Social support could generate perceived satisfaction for the quality of life when a patient receives social care with emotional support. There is a set of managerial implications and research requirements mentioning the role of social support in making the quality of life-related experience for patients (Garman, Leech et al. 1996, Volpe, Chen et al. 2006). Financial literacy allows individuals to allocate their income to appropriate financial tools that can be utilized in times of need. Although there is a need for research on factors affecting cancer patients' quality of life, to the best of the authors' knowledge, the role of financial literacy and financial burden in this context has rarely been studied (Gubler and Pierce, 2014).

It is said that cancer patients need a holistic treatment atmosphere including drugs, clinical treatments, social support and financial support when they feel unformattable with their lifestyle. Accordingly, studies mentioned that the quality of life of patients including cancer patients could not be established based on treatments alone, but they should be carried with financial assistance over financial toxicity and social support over mental pressure they experience (Gupta, et.al.2018). The relationships between financial distress and quality of life and the interlink between social support and quality of life had been found in previous studies as very valuable investigations within the cancer patients' context. However, it still claims further investigation with reference to different country contexts and lifestyle situations. ( Rukshani, et.al.2018).

Sri Lanka is a claimed research context in examining how cancer patients' quality of life should be improved via social and psychological aspects whilst the role of family members is also a considered matter (Rukshani, Kahandawala, Jayawardana, Karunarathne, Galgamuwa, Kumara & Gamage, 2018). But as per available empirical evidence, fewer or no comprehensive studies are being carried out to investigate how financial literacy and the quality of life of cancer patients are interrelated within Sri Lankan context. This research addresses foresaid empirical issues and country-specific issues (Rukshani, et.al., 2018). Implications of this research could contribute to policymakers and even business firms to predict and respond with strategies to penetrate the needs and wants of cancer patients in line with their financial literacy and uplifting quality of life. Findings may also help health advisory services to direct their social and family consultancy services to help the quality of life of the patients and their relatives in the scope of financial wellbeing.

Alongside this, this study also addresses the issues and knowledge gaps found in financial literacy amongst cancer patients in Sri Lanka whilst examining how it affects the quality of life. The author believes this study is one of the inputs for the policymakers and health sector professionals to extend their services on the quality of life of patients overall. In addition, respective officials could approach extended services to uplift the quality of life of patients and their families by educating financial literacy as one of the important matters to mitigate the pressures affecting their lives.

## **LITERATURE REVIEW AND HYPOTHESES**

### **Financial Distress, Social Support, and quality of Life**

The quality of life is only a reflection of the general state of affairs in every social community as well as on the planet as a whole as far as nature and physicality are concerned. It is normal for someone living in the modern world to have a much busier schedule than someone from a tribal society or any other era in our evolutionary history. However, it is not normal for them to be more stressed out and overworked than ever before, with no time for living their lives as required (Arber, et.al.2014). More people are unsatisfied and stressed when they miss the quality of

life for many reasons including health conditions. Not only do people expect considerably more from life in general, but specific expectations are there to satisfy the quality of life.

Financial distress of people including the situations faced by patients feel uncomfortable conditions including physical and mental health conditions. It refers to the fact that financial well-being may impact the quality of life due to direct and indirect influences (Arber, et.al.2014). On the other hand, positive financial habits like good savings and supportive arms could create a good quality of life for people facing health issues (Gupta, et.al.2018). Some studies mentioned that financial distress may create negative quality of life resulting in emotional and physical health issues (Gubler & Pierce,2014). This type of investigation is deemed to be monitored with situational variances. The degree of the seriousness of the health issues and the social perception of the health issues may differently influence patience to feel distressed. For instance, patience becomes uncomfortable when they feel they are not secure enough with social protection and financial strength (Gupta, et.al.2018; Workman, Draetta, Schellens & Bernards,2017). Some studies argue that the relationship between financial distress and the quality of life of people pr consumers should be studied in terms of the nature of the diseases and their perception of how general society reacts to them. The financial distress faced by cancer patients has been viewed in different terms like financial toxicity and financial hardships (Morrison,2015). In general, it is a known fact that cancer patients have to shoulder the high price challenges of cancer drugs, treatment methods and even clinical services that usually create financial distress or are similarly known as financial toxicity (Workman, et.al., 2017). As per some studies, the said financial distress has been attributed to related aspects like gender, the stage of cancer, availability of insurance facilities, accessibility to the treatment centres and threat of loss of income. Therefore, the financial distress of cancer patients seems a more connected notion and studies are further required to investigate how it affects the quality of life in different societies and countries (Morrison,2015; Workman, et.al., 2017). The research context of Sri Lanka is also a significant matter to be investigated since there are centers to provide services to cancer patients including supportive services to mitigate the financial distress of the patience and the guardians too. Previous studies mentioned that people become motivated or managed their life-related issues, particularly when they feel no good due to illness, provided they are being facilitated with remedies for financial distress.

The rigour of the financial distress is attributed to a snowballing effect on quality of life. Once the cancer patient or his or her family members face financial issues, it has to limit their budget for activities that directly impact on quality-of-life People may reduce their leisure activities, and the amount of money spent on food, clothing and even do longer hours of working (Shankaran, Jolly & Blough,2012). This type of lifestyle change will hurt the overall quality of life in the end. Thus, many studies have proved the link between financial distress and quality of life with different explanations whilst proposing further studies to revalidate the interrelationship between financial distress and quality of life. Accordingly, having good financial

conditions could impact to make positive health conditions for patients to spend a quality of life. Accordingly, this study hypothesized the direct relationship between financial distress and quality of life-based on the empirical evidence mentioned by recently held studies (Arber, et.al.2014; Gupta, et.al.2018).

H1: Financial distress (FD) has a significant impact on the quality of life (QoL) of cancer patients.

In addition, current society is in a period where access to affordable, high-quality healthcare has decreased. Large financial resources are needed for health care services to treat patients (Ross,1996). Therefore, it is crucial to have the financial expertise and knowledge that can make it possible to raise enough money to cover these basic requirements (Schagen & Lines,2019). The link between proper financial knowledge and behaviour shows whether someone is aware of the expense of maintaining his health and whether they are financially responsible. Many researchers in the social sciences typically hold that residents' socioeconomic position and health are closely associated (Ross,1996). The socioeconomic status element of income has a strong positive impact on health, and high-income individuals typically have better health because they have access to more resources (Williams,1990). The impact of variables like education and racial discrimination on health has been explored by academics. Additionally, social support given for patients has been viewed on immediate and distance factors. As per some studies, patients need to have family support and closet chats to discuss their issues and problems related to their quality of life and disease-related matters. Thus, it is important to notice that the influence that could be made by the social parties including family members is a pivotal matter to provide a required environment to care the cancer patients (Schagen & Lines, 2019).

As per the study carried out by Colloca & Colloca (2016), social support for a cancer patient could be arranged via counselling the spouse, family members and immediate friends of the victimized person. Such a social role could provide good mental relief for the cancer patient to feel good and make a base for a quality of life. Therefore, it is important to have formal programs organized through community centres or clinical centres to educate the social role of the patient's family members and friends.

In addition to the issues of physical conditions and financial distress, studies have investigated and emphasized the critical importance of social factors or social needs for cancer patients as an important inclusion for them to feel good overall (Navon & Morag,2004). The social support given to cancer patients could enhance their mental condition to retain their love and social contact. The role of spouses and family members is very decisive for cancer patients to manage their health condition besides the regular treatments (Street, Couper, Love, Bloch & Kissane, Street, 2010). Accordingly, it is said that social need satisfaction has a direct link with mental relief for patients and eventually the quality of life (Street, et.al.2010), and most countries and clinical centres had initiated programs including Sri Lanka to execute social services and educating programs to help family members to understand their role to assist to cancer patients to experience relief for a better life. This reflects that cancer

patients need holistic caring other than the regular drugs and treatments to experience recovery with the support of social needs other than financial support. Some studies directly addressed how residents' financial literacy affects their health. Based on this, this study linked financial literacy with personal health status to investigate if financial literacy affects personal health status (Ross,1995). Social support has been researched as another main force to determine the quality of life in healthcare sector studies (Garman, Leech et al. 1996, Volpe, Chen et al. 2006). Financial literacy has been viewed in different ways by authors depending on the context being considered. In general, Sri Lanka reports a controversial level of financial literacy compared to its higher level of general literacy (Central Bank Report,2020). Alongside, cancer patients are reported as having less financial literacy or no proper focus on the financial scenario of their families to keep their living standards at an acceptable level. Some studies deeply examined this matter since cancer patients suffer from diseases and they neglect the essential components of family members and their quality of life including her quality of life (Zafar, et.al., 2013). The research requirements regarding different countries and patient categories have been claimed by previous authors addressing knowledge gaps prevail. This study also considered the role of social support as one of the investigating areas to contribute new knowledge for practice-related requirements. Accordingly, it made the undermentioned hypothesis on social support and quality of life-based on the empirical evidence (Gupta, et.al.2014; Ross,1995; Williams,1990).

H2: Social support (SS) has a significant impact on the quality of life (QoL)of cancer patients.

## **METHODOLOGY**

This study followed a deductive research approach as per the nature of the problem statement and key investigation areas. Hypotheses were developed based on the empirical evidence followed by a literature review accompanied by context-related rationales. the sample was selected based on the cancer clinic centres available in Sri Lanka followed by the prior approval of the necessary parties. Data collection was assisted by a questionnaire and all the enumerators were educated about the technicality of the question contents whilst approaching responsible employees of the hospital management service to reach the respondents. It distributed 285 questionnaires, but the final analysis was limited to 187 as it received only 206 questionnaires out of which 19 questionnaires were removed due to incompleteness of information. It followed the normality test for the data set by using the SPSS-23 version and the reliability test was carried out with the Cronbach Alpha test (Kim,2013). This study followed the CB-SEM model to test the hypotheses after satisfying the initial assumption tests and model fit indices (Hair, et. al,2016). Alongside, Structural Equation Modeling (SEM) technique was used since it meets the minimum sample size of 200 to support model fit (Jackson, 2003). Covariance-based SEM (CB-SEM) was the opted method since it satisfies the quantitative assessment considering convergent and discriminant validity (Urbach, & Ahlemann, 2010).

## Measures of the Study

Financial literacy has been viewed in terms of how the respondents feel financial distress. Thus, the main independent variable of financial literacy was operationalized on financial distress. To measure perceived financial distress, a comprehensive score for financial toxicity measure developed by de Souza et. al. (2014) was used. The 11-item scale consists of one financial item (e.g., “my out-of-pocket medical expenses are more than I thought they would be”), two resources items (e.g., “I can meet my monthly expenses”), and eight affect items (e.g., “feel financially stressed”). Each item was measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Quality of life was measured by using seven items scale proposed by Cella et. al. (1993) to measure physical well-being. Social support was measured based on the eleven items scale mentioned by Gündüz, Yılmaz & Karabulutlu (2016) and Akça Talaz & Çınar (2008).

## DATA ANALYSIS

### Profile of the Sample

The survey was limited to 285 respondents who obtained the treatment from government clinic centres. The questionnaire was executed subject to ethical conditions and institutional norms of the treatment centres. The data collection work was assisted by 5 fieldwork enumerators including one health sector administrative officer for the necessary coordination and official permissions. Finally, 187 questionnaires were considered for the final analysis due to the incompleteness of the information and rejections of respondents to answer questions related to quality of life. Accordingly, it has presented the summary of the sample profile in the undermentioned table.

**Table I: Demographic Data of the Sample**

Age	Gender	Income (LKR) “000”	Education Level	Marital Stage
18-25: 03	Male:81	40 Less: 11	OL:47	Single:02
25-35: 13	Female:106	40-80: 118	A: 105	Married:176
35-45: 48		80-120: 37	Dip: 16	Divorced: 05
45-55: 86		120-160: 16	Degree:14	Widowed:04
Above55: 27		More 160:05	Masters:05	
<b>187</b>	<b>187</b>	<b>187</b>	<b>187</b>	<b>187</b>

*Source: SPSS-21 Output*

### Profile of the Health Level of Cancer Patients

It has inquired about the basic information about the health level of cancer patients subject to ethical limitations. The summary of the information is given in the undermentioned table.

**Table II: Information about the Cancer Patients**

Stage of the Disease	Frequency	Stage of Treatment	Frequency
Stage 0	09	Diagnosed Recently	88
Stage 1	85	Under Treatment	91
Stage 2	49	Completed Treatment	08
Stage 3	07		
Stage 4	04		
Do not Know	33		
<b>Total</b>	<b>187</b>		<b>187</b>

*Source: SPSS-21 Output*

### Reporting Reliability of the Measurements

It has done the reliability analysis based on the output of the SPSS-21 statistical package. All the variables found an acceptable level of reliability with the respective items used to measure the observed variables (Kim,2013). The following table presents the output of the reliability analysis.

**Table III: Reliability of the Variables**

Variable	Number of Items	Cronbach Alpha Value
Financial Distress	11	0.753
Social Support	11	0.764
Quality of Life	07	0.802

*Source: SPSS-21 Output Data*

### Normality Test of the Variables

It has done the normality test before running the final test for testing hypotheses (Kim,2013). Accordingly, Kurtosis and Skewness tests were done by using the SPSS-21. All the variables were found within the acceptable thresholds of both Kurtosis and Skewness. A data set is named normal if the skewness or kurtosis of the data is ranged between  $-1$  and  $+1$  (Ghasemi & Zahediasl,2012). Accordingly, Financial distress reported Skewness and Kurtosis values as 0.598 and 0.412 respectively where the Shapiro-Wilk test value was 0.714. Social support measured by using eleven items

reported the Skewness and Kurtosis as 0.317 and 0.398 respectively whilst its Shapiro-Wilk test value was 0.832. The Skewness and Kurtosis values of Quality of Life were 0.617 and 0.562 and the Shapiro-Wilk test value was 0.472 indicating an acceptable zone for normality (Kim,2013).

### Test of Hypotheses and Discussions

The hypotheses testing process was executed after confirming the sample adequacy. Accordingly, it reported Kaiser-Meyer-Olkin (KMO) as 0.839 whilst the p-value was found to be less than 0.05 justifying the required scope to do a factor analysis (Williams, Brown, & Onsmann, 2010). It executed an Exploratory Factor Analysis (EFA) and all the items had factor loadings greater than 0.5 confirming its convergent validity (Ho, 2013). In addition, Average Variance Extraction (AVE) and Construct Reliability (CR) values justified the convergent validity of the constructs since the AVE values were higher than 0.5, and CR values were found greater than 0.7 (Fornell & Lacker,1981).

Accordingly, it was able to execute the Confirmatory Factor Analysis (CFA) as validity measurements were within the acceptable zone (Ho, 2013; Urbach & Ahlemann, 2010). It executed the CFA to confirm model fit before testing the two direct paths as mentioned in the hypotheses. The measurement model indicated the normed Chi-square as 2.57 whilst the Root Mean Square Error of Approximation (RMSEA) was found to be 0.053. In addition, it reported the Incremental Fit Indices (IFI) and Goodness of Fit Index (GFI) as 0.807 and 0.912 respectively for the Improved model. The improved model was reported with a p-value below 0.05 (Ho, 2013; Kline, 2005). Accordingly, the AMOS-SEM outputs were used to test the hypotheses and report the outcomes. The output statistics produced by the regression weights made by AMOS-SEM were used to test the hypotheses (Ho, 2013). This study hypothesized only two hypotheses as direct path hypotheses. The summarized statistical estimates have been stated in Table 3.

**Table IV: Output of CB-SEM Estimates**

Hypothesis	Relationship	Estimates	S.E.	C.R.	P	Results
H1	FD <--- QoL	0.174	0.071	-2.109	***	Supported
H2	SS <--- QoL	0.105	0.382	-1.092	***	Supported

*Source: Extraction of AMOS-23 Output*

*Note: FD: Financial Distress; QoL: Quality of Life; SS: Social Support*

Alongside the findings reported it could verify that the financial distress faced by cancer patients had made a significant impact on their quality of life. Thus, it is wise to pay serious attention to maintaining the needful environment and emotional rest for cancer patients in terms of financial issues to make them comfortable with the quality of life. The financial literacy of the patient and his guardians could provide some sort of relief to make the patient feel good about the quality of life. In addition,

social support was found as another important force to make the quality of life a better one for cancer patients. The results revealed that social support that remains around the patient could facilitate his or their experience of a quality of life. Therefore, the guardians, caretakers and health sector officials need to guide the patient to associate the social support given by immediate parties around him or her life. Such social interactions could provide mental relief for cancer patients as proved in this study as well.

Additionally, the notion of caring for cancer patients with indirect mechanisms like financial support to mitigate the distress and social support to make them experience relief had been proved with the tested hypotheses. This provides a managerial note for cancer treatment centres to come up with social programs to educate family members and friends to identify their roles to support the patients (Brax, 2018). The overall outcome of the treatment methods will be intensified if financial distress and social support-related measures are arranged for patients. Thus, caring for cancer patients needs a strategy combined with different stakeholders other than the Medicare staff and patients. For instance, clinical centres attached to hospitals could provide lecture facilities to patients' guardians and be supposed to recognize their roles to make the patient mentally fit to experience a better recovery. The behaviour, communication quality and relationship role of the social groups connected with the cancer patients could provide a valuable contribution to make sure quality of life for cancer patients.

The notion of financial distress or financial toxicity has also been proved to have a direct link with the quality of life as the hypothesis tested in this study. Accordingly, the future implications have to be arranged to make the life of cancer patients a quality one with some remedial actions. It is practically known factor that treatment costs including the prices of drugs are beyond the controllability of patients and their facilities. Thus, it can educate the family members of the cancer patients on the financial sources available for economically vulnerable cancer patients so that financial distress can be mitigated (Yousuf,2016). In addition, personal financial literacy could be improved with some formal educational activities for family members to avoid the mental distress caused by financial issues so that they can pay proper attention to cancer patients to play their social role.

## **CONCLUSION AND FURTHER RESEARCH AREAS**

This research attempted to examine how the quality of life of cancer patients is influenced by financial distress as reflected within the scope of financial literacy. Additionally, the role of social support was researched to evaluate how it does impact to maintain the quality of life of cancer patients addressing knowledge gaps and practice issues found within the context of Sri Lanka. Previous studies have proven the relationships between financial distress, social support, and some other social and psychological forces that affect the quality of life of different people suffering from diseases. However, it found a knowledge gap in Sri Lanka to examine the behaviour of cancer patients in social and psychological aspects (Jayarajah, et.al., 2019). Accordingly, this study examined the hypotheses on how financial distress and social

support influence the quality of life of cancer patients. The results proved a significant impact of both financial distress and social support on the quality of life of cancer patients. Thus, it could propose to have policies and managerial implications to initiate formal education for guardians and patients to manage the financial aspects and social support to make the quality of life apart from the medical treatments taken for cure. It is even good that health sector professionals and supportive staff initiate more programs to educate cancer patients on how to manage the social and personal factors as a part of their recovery process for a quality of life. Apart from the said, this finding provides a direction to business perspective too. The consumer behaviour of cancer patients and their immediate families could be considered a significant context for businesses since it counts for a significant amount in numbers. Countries could evaluate the size population of the cancer patients and their immediate family members to come up with marketing approaches to improve their quality of life supported by consumer experience. For instance, welfare products supported by relevant marketing mix elements could be implemented to motivate cancer patients and their families to have a better consumer life. In addition, it is recommended to extend further studies targeting some communities that have been seriously affected by diseases like kidney disabilities and diabetics so that some significant outcomes could be found to contribute inputs for policy-making perspectives and social welfare decisions. Alongside this, further studies could be extended to examine how patients suffering from non-communicable diseases face challenges in their regular consumption behaviour due to financial distress and lack of social support. This could provide insights to have decisional knowledge for business communities to rethink on marketing model attributed to welfare inclusions to penetrate such affected communities to ensure better consumption life.

### **ACKNOWLEDGEMENT**

I hereby acknowledge the invaluable support given by the University of Kelaniya, Sri Lanka for the research grant provided to conduct this study. Additionally, I would like to extend my sincere thanks to Associate Professor (Dr) Saeed Pahlevan Sharif attached to Taylor's University of Malaysia for his guidance and encouragement.

### **CONFLICT OF INTEREST**

The author declared no competing interests. The work explained in this research paper is original work and hasn't been presented nor did the work was accepted elsewhere.

### **REFERENCES**

- Adler, N. and A. Page (2008). Cancer Care for the Whole Patient: Meeting Psychosocial Health
- Akça Talaz A, Çınar S (2008). Comparison of psychosocial adjustment in people with and without diabetic foot ulceration. Australian Journal Advanced Nursing 25: 87-96.

- Bodie, Z. (2006). *Lessons on Adults Financial Literacy. Assessing adults financial literacy and why it matters*. N. F. I. A. I. S. University. Indiana State University: 2-9.
- Brax, T. (2018). *Third-sector in the health, social services and regional government reform. Rapporteur's report*. Ministry of Social Affairs and Health <http://julkaisut.valtioneuvosto.fi/handle/10024/160957>.
- Central Bank Report (2020). Central Bank of Sri Lanka
- Colloca, G., & Colloca, P. (2016). The effects of social support on health-related quality of life of patients with metastatic prostate cancer. *Journal of Cancer Education*, 31, 244-252.
- Ettner S.L. (1996). New evidence on the relationship between income and health. *Journal of Health Econ*. 15:67–85. doi: 10.1016/0167-6296(95)00032-1.
- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18(3), 382-388. <https://doi.org/10.2307/3150980>
- Garman, E. T., et al. (1996). The negative impact of employee poor personal financial behaviors Ghasemi A, Zahediasl S. (2012). Normality tests for statistical analysis: A guide for non-statisticians. *International Journal of Endocrinology and Metabolism*.
- Gündüz F, Yılmaz Karabulutlu E (2016). The assessment of illness perception, psychosocial adjustment and glycemic control in type II diabetic mellitus patients. *Journal of Anatolia Nursing and Health Sciences*, 19: 1006-1015.
- Ho, R. (2013). *Handbook of univariate and multivariate data analysis with IBM SPSS*. CRC press
- Jackson, E. (2013). Choosing a Methodology: Philosophical Understanding. *Practitioner Research in Higher Education Journal*, 7(1).
- Jayarajah U, Nagodavithane K, Basnayake O, Seneviratne S. (2019). Surgical management of papillary thyroid cancer: review of current evidence and consensus. *Sri Lanka Journal of Surgery*;37(4):18–23. <https://doi.org/10.4038/sljs.v37i4.8617>.
- Kim H.Y. (2013). Statistical notes for clinical researchers: Assessing normal distribution (2) using skewness and kurtosis. *Restor Dent Endod*. ; 38:52–4.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Morrison C. (2015). “Financial toxicity” looms as cancer combinations proliferate. *Nat Biotechnol*. ; 33:783-784.
- Rukshani,D. , Kahandawala, P., Jayawardana, K. , Karunarathne,D., Galgamuwa,L.S., Kumara,C. Gamage,C. (2018). Factors associated with quality of life among cancer patients in Sri Lanka, *International Journal of Community Medicine and Public Health*, 5(7):2705-2713DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20182603>
- Lusardi, A. and O. S. Mitchell (2014). The economic importance of financial literacy: Theory and evidence, *Journal of Economic Literature* 52(1): 5-44.

- Lusardi, A. and O. S. Mitchell (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business Economics* 42(1): 35-44.
- McNulty, J. & Khera, N. (2015). Financial Hardship--an Unwanted Consequence of Cancer of-pocket expenses and the insured cancer patient experience. *Oncologist*, 18(4): 381-390.
- Navon L, Morag A (2004). Liminality as biographical disruption: unclassifiable following hormonal therapy for advanced prostate cancer. *Social Science & Medicine*, 58:2337-2347.
- Ross, C. E. & Wu, C. L. (1995). The links between education and health, *American Sociological Review*, 60, 719-745
- Schagen, S. and A. Lines (2019). Financial Literacy in Adult Life. A report to the NatWest Group Charitable Trust, National Foundation for Educational Research (NFER).
- Shankaran, V. Jolly, S. & Blough, D. (2012). Risk Factors for Financial Hardship in Patients Receiving Adjuvant Chemotherapy for Colon Cancer: A Population-Based Exploratory Analysis. *Journal of Clinical Oncology*. 30 (14): 1608 – 1614 .
- Shim, S., et al. (2010). Financial socialization of first-year college students: The roles of parents, work, and education, *Journal of Youth and Adolescence* 39(12): 1457-1470.
- Stolper, O. A. and A. Walter (2017). Financial literacy, financial advice, and financial behavior. *Journal of Business Economics* 87(5): 581-643.
- Street A.F, Couper J.W, Love A.W, Bloch S & Kissane D.W, Street B.C. (2010). Psychosocial adaptation in female partners of men with prostate cancer. *European Journal of Cancer Care*, 19:234-242
- Urbach, N., & Ahlemann, F. (2010). Structural Equation Modeling in Information Systems Research Using Partial Least Squares. *Journal of Information Technology, Theory and Application*, 11(2), 5-40.
- Volpe, R. P., et al. (2006). An analysis of the importance of personal finance topics and the level of knowledge possessed by working adults, *Financial Services Review* 15(1): 81-99
- Williams D.R. (1990). Socioeconomic Differentials in Health: A Review and Redirection. *Social Psychology Quarterly*, 53:81. doi: 10.2307/2786672.
- Williams, B., Brown, T., & Onsmann, A. (2010). Exploratory Factor Analysis: A Five-step Guide for Novices. *Journal of Emergency Primary Health Care*, 8(3), 1-13.
- Workman P, Draetta G.F, Schellens J.H. & Bernards R. (2017). How much longer will we put up with \$100,000 cancer drugs? *Cell*. 168:579-583.
- Xiao, J. J., et al. (2009). Acting for happiness: Financial behavior and life satisfaction of college students. *Social Indicators Research* 92(1): 53-68.
- Yousuf Z.S. (2016). Financial Toxicity of Cancer Care: It's Time to Intervene, *JNCI: Journal of the National Cancer Institute*, Volume 108, Issue 5, djv370, <https://doi.org/10.1093/jnci/djv370>

Zafar, S. Y., et al. (2013). The financial toxicity of cancer treatment: a pilot study assessing out-of-pocket expenses and the insured cancer patient experience. *Oncologist* 18(4): 381-390.