



RELIABILITY AND VALIDITY OF FACTORS AFFECTING QUALITY OF LIFE IN BREAST CANCER SURVIVORS

Nor Intan Shamimi Abdul Aziz*, 

School of Business and Economics
Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia
Faculty of Business and Management
Universiti Teknologi Mara Kampus Puncak Alam, 42300 Bandar Puncak Alam, Selangor
Malaysia
shamimi4576@uitm.edu.my, intanaziz72@gmail.com

Mass Hareeza Ali 

School of Business and Economics
Universiti Putra Malaysia, 43400 Serdang, Selangor
Malaysia
mass@upm.edu.my

Ahmad Taufik Jamil

Faculty of Medicine
Universiti Teknologi Mara Kampus Sungai Buloh, 47000 Sungai Buloh, Selangor
Malaysia
atjamil@gmail.com

Yuhanis Abd Aziz

School of Business and Economics
Universiti Putra Malaysia, 43400 Serdang, Selangor
Malaysia
yuhanis@upm.edu.my

*Corresponding Author email: intanaziz72@gmail.com

Submitted: 18 January 2024

Revised: 16 March 2024

Accepted: 24 March 2024

Peer-review under responsibility of 9th ASIA International Conference (Langkawi, Malaysia) Scientific Committee

<http://connectingasia.org/scientific-committee/>

© 2024 Published by Readers Insight Publisher,

Office # 6, First Floor, A & K Plaza, Near D Watson, F-10 Markaz, Islamabad, Pakistan,

editor@readersinsight.net

This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>)



ABSTRACT

The high prevalence and mortality rates of breast cancer among women in global are a pressing concern. In Malaysia, about 8418 women from different cultural background were diagnosed with this disease in 2020, which emphasizing the need to address the factors that impact their quality of life. Certain factors have been identified through literature search and it was found that psychological state, self-care behavior, social support, healthcare support and the use of social media affect cancer women's quality of life. To identify the usefulness of the related items, this study assessed reliability and validity of a survey instrument measuring those five factors that relate to the factors affecting quality of life in breast cancer. It measured six constructs using a 5-likert scale. Thirty breast cancer survivors have participated in this study, which, in result, found the instrument to be reliable for all measured constructs. However, one construct and certain items were found to be invalid, indicating the need for revision to ensure the instrument's high validity. Future studies can explore these factors in more detail using qualitative methods through interview gathering data technique. The study also has policy implications to develop social media education and awareness program specifically for local women with breast cancer, as well as community to promote responsible and effective use of social media, which then focus to improve overall quality of life.

Keywords: *Breast Cancer; Quality of Life; Reliability; Validity*

RESEARCH HIGHLIGHTS

1. The global prevalence and mortality of breast cancer are alarming. In 2020, 8418 Malaysian women of various cultures were diagnosed with this disease, emphasizing the need to address their quality of life.
2. Thirty Malaysian breast cancer survivors volunteered for this survey. A five-point Likert scale was used to collect and analyze the data in IBM SPSS version 28 and SmartPLS4. Literature search found that psychological state, self-care behavior, social support, healthcare support, and social media use affect cancer women's quality of life.
3. Overall, the measurement model is reliable and valid. However, self-care behaviors and emotional quality of life have limitations. The research suggests refining or revising the measurement model for these constructs.

Research Objectives

8418 women from a wide range of ethnic backgrounds were diagnosed with breast cancer in Malaysia in the year 2020 (International Agency for Research on Cancer, 2020) highlights the significance of addressing the underlying causes that have an effect on the quality of life associated with breast cancer. Prior to carrying out the research study, it is necessary to carry out a feasibility study in order to guarantee that the appropriate items will be delivered to the actual participants in the data collection process. The purpose of this pilot study is to evaluate the reliability and validity of six factors that affect women's quality of life. These factors include psychological state, self-care behaviors, social support, healthcare support, and social media usage. The study will be conducted in order to determine the reliability and validity of these factors.

Methodology

A total of thirty breast cancer survivors from Malaysia were voluntarily participated in a survey that focused on factors affecting quality of life in breast cancer. There was a total of six measures included in the survey. It has been modified from previously published works in order to guarantee that it is relevant to the population that is being studied. The data was collected, gathered, and analyzed with IBM SPSS version 28 and SmartPLS4 using a Likert scale with five points. Reliability and validity were evaluated with the assistance of the software, which also helped to run the measurement model. In addition to Cronbach Alpha and composite reliability C, it additionally evaluated convergent and discriminant validity and indicator item loadings.

Results

The measurement model was tested using indicator loadings, average variance extracted (AVE), and composite reliability (CR). HTMT was calculated to analyze the discriminant validity. Most of the constructs achieved criteria for good reliability such as with higher values for Cronbach Alpha and composite reliability C (> 0.6). Majority of the indicator item loadings also present with acceptable values (> 0.5). Only small numbers of items were found to be slightly lower than 0.5. The self-care behaviors construct, where all twenty items had invalid item loadings (< 0.7), a lower AVE (0.094), and a lower composite reliability (0.114), is the area of greatest concern in this pilot study. Given the significance of the items in the construct, the researchers revised the items to make them more appropriate and suitable for the goal of the study rather than eliminating the construct altogether as it may jeopardize content validity (Memon et al., 2017). As for HTMT result, analysis yielded results that indicate the measurement model possesses adequate discriminant validity, as respondents were capable of distinguishing between constructs and providing distinct ratings for each. The measurement of HTMT value which is between ≤ 0.85 and ≤ 0.90 was suggested by Henseler et al., (2015) and updated by Franke & Sarstedt, (2019).

Findings

In general, the findings indicate that the measurement model demonstrates reliability and validity. However, specific constructs, namely self-care behaviors and emotional quality of life, do exhibit certain limitations. The research indicates that additional refinement or revision of the measurement model may be necessary for these constructs. Despite its intended purpose of data collection, the study is not without its limitations, which warrant a few considerations. A relatively small sample size of thirty breast cancer survivors participated in the study. This limits the applicability of the findings to other populations. Additionally, the research utilized purposive sampling, a method that may have introduced bias into the sample due to the inclusion criteria and the reliance on a solitary support group comprised of members of a single non-profit organization (Tongco, 2007). Despite these limitations, the assessment of the study's validity and reliability provides valuable insights into the factors that impact the quality of life among individuals who have survived breast cancer.

Acknowledgement

The corresponding author, a doctoral candidate, wishes to express her gratitude and appreciation to her supervisory committee for their excellent support and encouragement throughout her doctoral journey.

References

- Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: a comparison of four procedures. *Internet Research*, 29(3), 430–447. <https://doi.org/10.1108/IntR-12-2017-0515>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- International Agency for Research on Cancer. (2020). *Ranking (Breast), estimated age-standardized incidence rates (World) in 2020 , all ages (excl . NMSC)*. 2020.
- Memon, M. A., Ting, H., Ramayah, T., Chuah, F., & Cheah, J. H. (2017). A review of the methodological misconceptions and guidelines related to the application of structural equation modeling: A malaysian scenario. *Journal of Applied Structural Equation Modeling*, 1(1), i–xiii. [https://doi.org/10.47263/jasem.1\(1\)01](https://doi.org/10.47263/jasem.1(1)01)
- Tongco, M. D. C. (2007). Purposive sampling as a tool for informant selection. *Ethnobotany Research and Applications*, 5, 147–158. <https://doi.org/10.17348/era.5.0.147-158>

Author's Biography



Nor Intan Shamimi Abdul Aziz is a lecturer for the Health Administration Program at the Faculty of Business and Management, Universiti Teknologi Mara Puncak Alam, Selangor. She holds a bachelor's degree in health administration (Hons.) from Universiti Teknologi Mara Shah Alam and a master's degree in business administration (Healthcare Management) from Universiti Teknologi Malaysia in Kuala Lumpur. She has earned a few local research funds for research projects. She is currently doing her PhD in Management at Universiti Putra Malaysia in Serdang, Selangor. She is interested in healthcare-related topics such as management, behavior, education, and informatics.



Assoc. Prof. Dr. Mass Hareeza Ali is a senior lecturer at School of Business and Economics, formerly known as Faculty of Economics and Management, Universiti Putra Malaysia (UPM), Malaysia. Currently, hold a position as a Director, Centre of Entrepreneurial Development and Graduate Marketability (CEM). She obtained an MBA majoring in Human Resource Management. Completed her PhD from University of Huddersfield, United Kingdom with research interest in the area of service management, service quality, business communication and entrepreneurship.



Assoc. Prof. Dr. Ahmad Taufik Jamil is a consultant Public Health Medicine Specialist. His special interests are physical activity and health, exercise prescription and health informatics. He has more than 25 years' working experience. He started his carrier as Medical Officer in Ministry of Health, Malaysia in 1995. He was appointed as Medical Lecturer in the Department of Community Health, UKM in 2002. He was head of the IT department, HUKM, for 8 years. He is currently an Associate Professor in the Department of Public Health

Medicine, Faculty of Medicine, UiTM. He was also a columnist in *The New Strait Times Press* and wrote articles on physical activity and health.



Yuhanis Abd Aziz is a professor of marketing at the University of Sharjah in the United Arab Emirates. She has a PhD in Business Management from the University of Nottingham, UK, as well as a Master's degree in International Hospitality Management from Strathclyde University in Scotland, UK. Prof. Yuhanis has an impressive record of research publications and has served as the project leader for several research grants. Her research interests include consumer behavior, customer experience management, tourism marketing, and service marketing.