

## **Exploring the Critical Factor towards Positive Quality of Life among Breast Cancer Survivors**

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### **Abstract**

*Breast cancer had become one of the most common disease among female in Malaysia. Hence this study was proposed to explore the factor towards positive quality of life among breast cancer survivors as the issue raised due to the increasing population of breast cancer survivors. In this qualitative study of phenomenological design, nine breast cancer survivors who attend the informal MAKNA meeting at Social Work Department, Taiping Hospital were recruited by using purposive sampling method. The raw data obtained in face-to-face interviews carried out in individual setting with several semi structured question as a guidance were then analysed by using thematic analysis method. There are five theme emerged which are spiritual belief, optimism and positive thinking, awareness, lifestyle and pleasurable activities. Optimism and positive thinking was most frequently mentioned by the informants followed by the spiritual belief. Almost all the informants had mentioned that spiritual belief and optimism and positive thinking allowed them to have faith while going through their treatment and recover from the threat of breast cancer physically and psychologically. As most of the research with related topic conducted in Malaysia were done with quantitative method, the finding of this qualitative study is expected to provide a broad direction for the further study in this topic. Besides, the findings of this study will be able to provide preliminary information to the others breast cancer survivors on how to cope with cancer. Hence, better adjustment with the illness towards positive quality of life will be achieved.*

**Keywords:** *Breast cancer; survivors; critical factor; quality of life*

### **1. Introduction**

From all type of cancer, breast cancer is the most common type of cancer among women (Bray, Ferlay, Soerjomataram, Siegel, Torre, and Jemal, 2018). In Malaysia, a total number of 43837 new cases of cancer diagnosis was reported during 2018, and 17.3% of them were breast cancer cases. However, breast cancer patients had a higher survival rate compare to other cancers (WHO, 2019).

Even though the rate of breast cancer patient survive from the threat of breast cancer had increase over years, the breast cancer survivor experience changes in both physical aspect and psychological during the processes of diagnosis, treatment and their survival life after the treatment as they experience fears and concern about disfigurement that might happened after surgery (Williams & Jeanetta, 2016). After received treatment, they experience high level of stress, anxiety fear of recurrence of cancer, childbearing issue, and also some physical symptom such as pain and impaired limb movement (Sadler-Gerhardt, Sadler-Gerhardt, Reynolds, Britton, & Kruse, 2010).

On top of that, their condition worsen when they also experience memory impairment such as decline in speed of cognitive process, attention and concentration (Von Ah, Habermann, Carpenter, & Schneider, 2013). All of these factors might lead to poor quality of life of the cancer survivors. Quality of life is one of the outcome measure that indicate how certain factor such as stress, social support, and spirituality affect the patient's recovery from the illness and their daily life (Levine, Yoo, & Aviv, 2017). Hence, individual basis factor such as cultural factor, spirituality, social support, psychosocial concern, and physical concern are found as factors and concern of the breast cancer survivor that affect their quality of life based on the previous study (Sterba et al., 2014). Hence, this study is proposed to explore and understand the effective factors that affect quality of life among the breast cancer survivors.

### **2. Methodology**

#### **2.1 Study design**

The case study approach is used in this study, the face-to-face interview was carried out in individual setting with several semi structured question as a

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guidance after the informants complete the socio-demographic questionnaire.

### 2.2 Sample

The informants were recruited from the monthly informal meeting National Cancer Council Malaysia (MAKNA) centre in Social Work Department, Taiping Hospital by using purposive sampling method. Eligible study participants had (a) agree to participate in the study voluntarily with granted informed consent, (b) clinically diagnosed with breast cancer, (c) aged 18 and above (Nock, et al., 2015; Grimmett, 2016), and (d) diagnosed with breast cancer at least 1 year ago (Grimmett, 2016). The BCS were excluded if (a) diagnosed with type of cancer other than breast cancer, (b) had cognitive impairment, and not giving inform consent, (c) unable to understand the structured question and explain their experience in English, Chinese or Malay language.

### 2.3 Measurement

Several semi-structured questions will be used as a guide for the face to face interview session enable the researcher to question and prompt the informant correctly. The semi structure question prompt the informant regarding several dimension, (i) impact of breast cancer diagnoses, (ii) psychosocial quality of life, (iii) physical quality of life, (iv) spiritual quality of life and (v) Marital relationship after diagnosis.

### 2.4 Data collection

The ethical approval was sought from the Ethics committee from Universiti Pendidikan Sultan Idris (UPSI) (reference number: 2019-0029-01) and the permission was granted from the MAKNA. The BCS were approached during the monthly informal meeting at MAKNA centre in Social Work Department, Taiping Hospital. The informants who gave written informed consent, permission on audio

recording and fulfilled inclusion and exclusion criteria were asked to complete the socio-demographic questionnaire, then participated in the face-to-face interview. The face to face interview was conducted in the counselling room of the MAKNA centre to ensure the confidentiality of the participants after informed consent, audio recording and transcription form were obtained from the participant.

### 2.5 Thematic analysis

In this study, thematic analysis method is used to analyse the data obtain from the participant. The thematic analysis included several step in generating the theme from the transcript of interview (Braun & Clarke, 2014). The steps of the thematic analysis include (i) familiarization with data where the researcher would need to listen back to the audio recorded during the interview session for several time in order be familiar with the information provided by the informants, (ii) organize the raw data obtained in a more systematic way by generate initial codes, (iii) generating themes according to the systematic code, (iv) consult with the expert panel to determine whether the themes generated are appropriate and the codes listed under the theme are relevant, (v) define and name the theme and finally (vi) analysis would be converted into a report that is interpretable by using some examples that are related to the issue and study question.

## 3. Results

### 3.1 Demographic characteristic and diagnostic variable

The sample group consist of the three major races in Malaysia which are four Chinese informants, three Malay informants and two Indian informants. All of the informants participated in this study were female breast cancer survivors from low level income family with age ranged from 40 years old to 63 years old.

Table 1. Demographic information and diagnostic variable of informant

Informant	Age	Ethnicity	Gender	Religion	Marital status	Year of diagnosis (age at the year)
A	49	Chinese	Female	Buddha	Married	2009 (39)
B	59	Chinese	Female	Buddha	Widowed	2007 (47)
C	53	Chinese	Female	Christian	Married	2012 (46)
D	54	Chinese	Female	Buddha	Married	2010 (45)
E	59	Indian	Female	Hindu	Married	2014 (54)
F	40	Malay	Female	Islam	Married	2015 (36)
G	53	Indian	Female	Hindu	Married	2016 (50)
H	51	Malay	Female	Islam	Married	2014 (46)
I	63	Malay	Female	Islam	Married	2016 (60)

### 3.2 Qualitative analysis themes

- *Spiritual belief*

Spiritual belief was found to be one of the critical factor toward positive quality of life among BCS:

In Buddhist, this is “yin guo” which means the consequences we receive are all due to the reason which is what we had done before, so I don’t have to feel sad about diagnosis as breast cancer patient, it is just I did something before as the “yin”

(reason), so now I receive this as a “guo” (consequences). I think all the lucky things occurred because I start leaning Buddha, and I free the turtle instead of sacrifice it for own life, that’s why I can be cured.

[Informant B, Chinese]

The first time I stepped in the church, there are two person hug me, two person that we never meet before, at that moment, I felt secure, it was like, there is someone keep comforting me, after my treatment, I felt insecure and torturing, I wanted to give up on myself, but when they hug me, I finally felt secure. Then only I knew, the two person never hug other like this before, it must be the God, He send them to comfort me.

[Informant C, Chinese]

I went to masjid, I went to surau, I went to listen to the talk after I was diagnosed, I join religious activities, religious also play important role la, we have to pray a lot, worship God, ask Him to protect us.

[Informant F, Malay]

What I believe is God can give you the sick, that means He, that means that He think you are strong enough to fight, if you can’t fight, you are weak, He won’t give you that sick.

[Informant G, Indian]

The narrative of informants generally shows that the informants believe that God have the power over their destiny. They believe that even they were destined by their God as breast cancer survivor, they still believe that their God helped them to survive from the illness in many different way. Besides, they also believe that doing religious worship, praying and joining religious activities would help them in surviving from the breast cancer and live a better and happier life since then.

When they believe the breast cancer as God’s blessing, they will finally perceive the breast cancer as a positive event in their life, be more confidence and perceive a higher level of self-efficacy in overcoming all the difficulty in their life regardless their current situation which is diagnosed with breast cancer or perceived by others as different and weak population. As they are able to carry out activity just as other individual without breast cancer, they will fell happy and satisfy with their present life and hence having a better quality of life and psychological well-being. Hence, religious believe is one of the factor toward positive quality of life among breast cancer survivor especially for their psychological well-being.

- *Optimism and positive thinking*

Another theme emerged is optimism and positive thinking. Typical comments in this theme include:

I thought I won’t survive, God already prepare to take me already, I think, but my will power was there la, to tell ok, I think I can make it, God giving me another one more chance, fight back and come back.

[Informant E, Indian]

Don’t listen to what the people say, you feel what, you feel what, you do what, it is up to you, one thing you must be very happy and very strong, you strong up yourself say there is nothing, you can ah, go ahead.

[Informant G, Indian]

They have to be strong, they have to be strong and they have to take it because actually is the gift from God, so you just have to accept it, and be happy and just take life as it is.

[Informant D, Chinese]

The thing is your body la, how do you take, if your heart and your mind, mind set how do you think, if you think you are happy, you want to live for your family, and you want to see your family happy, and all that, you fight for it.

[Informant G, Indian]

The informants’ narrative shown a similarity in having optimism and positive thinking about their diagnosis of breast cancer and present life throughout their survivorship. They would try to look at the bright side of the event occurs and face the adversity positively and believe that everything will eventually work out regardless of their current situation. Hence, they are able to perceive a better quality of life in psychological aspect.

- *Awareness*

Awareness was identified as the fourth theme. The comment form informants include:

Learn from MAKNA meeting, every time when we meet, Mama will share, like don’t take the supplement, eat something natural is good enough, not all of the supplement suitable for cancer patients, it might have side effect

[Informant A, Chinese].

Because we always heard others saying that cancer seems can’t be cured, I was

told that cancer will not, cancer can't be cured, but actually no, it can be cured if we go through the right treatment

[Informant F, Malay].

Anyone who have this illness, must be fast, go for treatment, don't wait until later stage, go and see the doctor, so you can undergo the treatment, because not all the patient are same, usually it got different type, some are lumps, some are purulence, doctor will not straight decide to operate for all patient, they will see first, look at the result of checking

[Informant H, Malay].

The importance of positive and correct awareness about breast cancer diagnosis had been indicated in the informants' narrative. According to the breast cancer survivors, it is very important for them to realize that breast cancer does not means the end of their life, a breast cancer patient can still survive, all he/she needed to do is accept the treatment offered by doctors and take care of themselves after the treatment. When they have the correct mind-set, they will be able to calm down and make a correct decision instead of stressing themselves in worrying about their diagnosis with breast cancer, hence, they will be able to overcome the adversity during treatment and have a better quality of life after treatment without worrying about the recrudescence.

Besides, it is also very important to educate the society, as the informants said, some of the people around them might have wrong believe about the breast cancer and hence providing inappropriate information or suggestion that might became a stressor to breast cancer patient. Society that is educated with correct information about the breast cancer would help in providing help and encouragement to the breast cancer patient and hence leading to a better quality of life among breast cancer survivors before and after treatment.

- *Lifestyle*

Lifestyle was also identified as a theme and the comment of informants are as followed:

Diet lo, like white rice, I do not take much rice, change to brown rice like ecobrown, I also reduce to consume sugar lo, I also try to buy organic cane sugar lo, and I use sea salt, I use olive oil and now sunflower seed oil

[Informant A, Chinese].

I do a lot of exercise like *jalan semut* and other exercises that Mama teach me, so I can overcome the numbness and difficulty in lifting my arm after the operation

[Informant B, Chinese].

I have to take care of myself lo, try not to work too hard, have enough rest, then only I can live well

[Informant B, Chinese].

According to the informants, most of them had mentioned about their changes toward a healthier lifestyle in the way of exercise, having a healthy diet and having enough sleep and rest.

The healthy life style is one of the important factors toward positive quality of life among breast cancer survivors as it allow breast cancer survivors to perceive a higher position in life just like an individual without breast cancer when they experienced a less stressful environment, reducing the risk of recrudescence and overcome the side effect of the treatment such as limb numbness and difficulty in lifting their arm.

- *Pleasureable activities*

The last theme was described as pleasurable activities. The comments of informants as followed:

My favourite things, is cooking, then I like to go like hiking, Maxwell hill and all, new, new place I like to go.

[Informant E, Indian]

After my retirement now, I feel I am freer, I can more look after my house, I can cook myself, I look happier la.

[Informant G, Indian]

Fishing, when I want to forget all the stress, I go fishing.

[Informant H, Malay]

The similarity among the informants shown that doing the activity they like would help them in reducing stress, and make them happy. This allows them to have better self-esteem and self-efficacy, and develop the ability to carry out the activities and act on their own life. Hence, pleasurable activities are one of the factors toward positive quality of life among breast cancer survivors as it helps breast cancer survivors in developing the sense of happiness and worth-living.

## 4. Discussion

### 4.1 *Spiritual belief*

Spiritual belief is one of the critical factors toward positive quality of life among breast cancer survivors. The informants believe that their God have the power over them, controlling the event occur in their life including the diagnosis of breast cancer. They believe that their God will protect them and help them to survive from the breast cancer. Besides, worship and praying to the God also allow them to have faith and feeling peace and secure during the adversity, hence bring them the hope to survive from

the breast cancer. The result of the research done by the Grimmett (2016) revealed that reliance of God is one of the factors that affect the quality of life of breast cancer survivors. African American breast cancer survivor has been depending on their relationship with God when they were facing the adversity. Hence, reliance on God was found as a very important factor that affect quality of life of breast cancer survivors. They believe that their diagnosis was part of God's plan and their narrative had directly reflected their need of a deeper and greater dependence on the God. On the other hand, the result is consistence with the finding of the systematic review conducted by Samuel and his colleague (2016). The finding of their study stated that spirituality or religious faith is one of the most factor affecting the quality of life among Black breast cancer survivors. As the spirituality and religious faith among the Black breast cancer survivors had been strengthen after their diagnosis, they had positively changed their outlook for the future. Moreover, their spirituality and religious faith helped them in developing a sense of appreciation for life throughout their survivorship.

#### 4.2 Optimism and positive thinking

On the other hand, optimistic and positive thinking had been reported as one of the critical factors toward positive quality of life. Optimistic and positive thinking has been highly related to the breast cancer survivor's quality of life as it allows them to have hope on their future life and believe that there are positive side from the adversity and everything will be eventually work out in the positive way. Hence, they believe that they will overcome all the obstacle and challenges to survive from the threat of death and live like all others ordinary people that are not diagnosed with breast cancer. The finding of optimistic and positive thinking is broadly in line with the finding of research conducted by Drageset, Lindstrøm and Underlid (2016). They found that emotion and the regulation of emotion is one of the important factors that affected breast cancer survivors. Positive thinking was reported as an important coping strategy among female breast cancer survivors toward positive well-being as it encouraged and motivated them during the adversity. Besides, the study also found that positive expectation to the future and fighting spirits was related to lower depression level and better quality of life among breast cancer survivors, while the negative feeling and thinking such as pessimism, depression, loss of energy and motivation, inclination to give up and hopelessness or helplessness will lead to a lower quality of life among breast cancer survivor. The systematic review done by Edward and his colleagues during 2019, had also presented a similar result where optimism personality was found as one of the predictors of better quality of life and personal resilience especially in the first 2 years of their survivorship. Based on the 36-research

reviewed, younger age, disease at first presentation, moderator such as social support clinical interventions and development of self-management abilities were also found as the factor toward positive quality of life among breast cancer survivors.

#### 4.3 Awareness

In the present study, awareness was also found as a theme based on critical factor toward positive quality of life among breast cancer survivors. Awareness refers to breast cancer survivors' appropriate knowledge or perception on the breast cancer and the treatment. Correct awareness about the breast cancer allowed them to understand the symptom, diagnosis and treatment of breast cancer, hence reducing the fear of death and serve a greater chance to survive from the illness by making an appropriate decision after their diagnosis. The result of the present study is consistence as the research of William and Jeanetta (2016). In the first theme of their finding, the breast cancer survivors' prior knowledge and awareness about breast cancer helped them in identifying the changes occurred in their breast, seek for early medical treatment and hence became a source of hope and empowerment for the breast cancer survivor to survive from the illness. It also helped them through the decision-making process after their diagnosis. There is also another similar result from systematic review done by Fearon, Hughes and Brearley (2019). Awareness and knowledge about the diagnosis, symptom and treatment is very important for breast cancer survivors as it affect their quality of life. In Arab country, the diagnosis was usually delayed as they experienced uncertainty and they would look for several modern and traditional healthcare providers before they accept their diagnosis due to lack of awareness and knowledge about breast cancer. The breast cancer survivor experienced anxiety and fear as they receive their diagnosis. They believed that the non-specialist hospital was providing incorrect advice, hence led to a perception that they were periphery to the treatment decision and the treatment they undergo against their wishes. Hence, correct awareness about the breast cancer is very important for the breast cancer survivor toward positive of life as it allowed them to be calm, having faith on their decision and the treatment they undergo.

#### 4.4 Lifestyle

Healthy lifestyle had been identified as one of the themes. The lifestyle adjustment like having enough rest, exercise and diet helps breast cancer survivors to lower the risk of recurrence. Besides, healthy lifestyle also help them to develop better physical strength and overcome the side effect of the treatment like limb numbness, hence helping the breast cancer survivors to restore their daily life to carry out activities as usual and lead to a better physical quality of life among breast cancer survivors.

The result of research conducted by Burke and his colleague (2017) also presenting the similar result. Lifestyle adjustment especially physical activity was found to be positively influencing the 4 dimensions of quality of life among cancer survivor. The participant had reported specific physical benefit after exercise. The physical activities had helped them to improve their physical functioning, overall energy level, physical strength, flexibility, weight/body composition, sleep quality functional mobility, ability to relax and coordination ability. As the breast cancer survivors' overall physical health improved, they were able to overcome the consequences of the breast cancer and the treatment, hence leading to a better physical quality of life among breast cancer survivors. In addition, the finding of Husebø and Husebø (2017) were also highlighted that lifestyle intervention as one of the factors affecting quality of life of breast cancer survivors. The systemic overview done had shown that lifestyle adjustment of participating in yoga exercise allowed breast cancer survivors to experience positive change in psychological component of quality of life. As they participate in yoga exercises, a better self-esteem and body image were developed. Besides, they also experienced reducing stress, increasing sleep quality, and better emotional and social well-being as their level of anxiety and depression decreased due to the lifestyle adjustment.

#### 4.5 Pleasurable activities

Lastly, pleasurable activities were also reported as an important factor toward positive quality of life among breast cancer survivors. Pleasurable activities like hobbies that allowed breast cancer survivors to feel enjoy, happy and forget about all the problem they encountered during their survivorship, leading towards a better psychological quality of life among breast cancer survivors. The research done by Lee Mortensen, Madsen, Krosgaard and Ejlersen

(2018), had also presented a similar result where the breast cancer survivors expressed their need of time focused on meaningful relation and activities instead of spending their precious time on treatment. In order to sustain health related quality of life of breast cancer survivors, living a life mean much more than surviving. Hence, maintaining normality and role functioning that enable them to carry out pleasurable activities and hobbies, performing like a normal individual who was not diagnosed with breast cancer would be one of the important factors toward positive quality of life.

#### 5. Conclusion

This study found that the five critical factors that include spiritual belief, optimism and positive thinking, awareness, lifestyle and pleasurable activities are highly connected to a positive quality of life among breast cancer survivors. Those factors enabled the breast cancer survivors to strengthen themselves, feel happy and have hope throughout their survivorship. Hence, these factors allowed them to have a higher self-efficacy and better control their current life with all the resources they have despite of their risky and vulnerable to be diagnosed as a breast cancer patient. On the other hand, there were several limitation while this study is conducted which include insufficient representation of the target population, lack of the previous research study in the similar culture as the targeted population, and potential bias during the data analysis process. In order to overcome the limitation, future study were suggested to include previous research study that are conducted in the similar culture as targeted population, include more informants with diversity in aspect of demographic characteristic and implication of care giver interview as validation method to ensure the validity and reliability of the result of future study.

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#### References

- Braun, V., & Clarke, V. (2014). What can "thematic analysis" offer health and wellbeing researchers?. *International journal of qualitative studies on health and well-being*, 9. <https://doi.org/10.3402/qhw.v9.26152>
- Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: a cancer journal for clinicians*, 68(6), 394-424. <http://dx.doi.org/10.3322/caac.21492>
- Burke, S., Wurz, A., Bradshaw, A., Saunders, S., West, M. A., & Brunet, J. (2017). Physical activity and quality of life in Cancer survivors: a meta-synthesis of qualitative research. *Cancers*, 9(5), 53. <https://doi.org/10.3390/cancers9050053>
- Drageset, S., Lindstrøm, T. C., & Underlid, K. (2016). "I just have to move on": Women's coping experiences and reflections following their first year after primary breast cancer surgery. *European Journal of Oncology Nursing*, 21, 205-211. <http://dx.doi.org/10.1016/j.ejon.2015.10.005>

- Edward, K. L., Chipman, M., Giandinoto, J. A., & Robinson, K. (2019). Quality of life and personal resilience in the first two years after breast cancer diagnosis: systematic integrative review. *British Journal of Nursing*, 28(10), S4-S14. <http://dx.doi.org/10.12968/bjon.2019.28.10.S4>
- Fearon, D., Hughes, S., & Brearley, S. G. (2019). Experiences of breast cancer in Arab countries. A thematic synthesis. *Quality of Life Research*, 1-12. <http://dx.doi.org/10.1007/s11136-019-02328-0>
- Grimmett, A. L. (2016). The Experience of Survivorship: Quality of Life for African American Breast Cancer Survivors. <https://scholarworks.waldenu.edu/dissertations/3098>
- Husebø, A., & Husebø, T. (2017). Quality of life and breast cancer: how can mind-body exercise therapies help? An overview study. *Sports*, 5(4), 79. <http://dx.doi.org/10.3390/sports5040079>
- Lee Mortensen, G., Madsen, I. B., Krogsgaard, R., & Ejlersen, B. (2018). Quality of life and care needs in women with estrogen positive metastatic breast cancer: A qualitative study. *Acta Oncologica*, 57(1), 146-151. <http://dx.doi.org/10.1080/0284186X.2017.1406141>
- Levine, E. G., Yoo, G. J., & Aviv, C. (2017). Predictors of quality of life among ethnically diverse breast cancer survivors. *Applied research in quality of life*, 12(1), 1-16. <http://dx.doi.org/10.1007/s11482-016-9447-x>
- Nock, N. L., Owusu, C., Flocke, S., Krejci, S. A., Kullman, E. L., Austin, K., ...& Vargo, M. (2015). A community-based exercise and support group program improves quality of life in African-American breast cancer survivors: a quantitative and qualitative analysis. *International journal of sports and exercise medicine*, 1(3). <http://dx.doi.org/10.23937/2469-5718/1510020>
- Sadler-Gerhardt, C., Reynolds, C., Britton, P., & Kruse, S. (2010). Women breast cancer survivors: Stories of change and meaning. *Journal of Mental Health Counseling*, 32(3), 265-282. <http://dx.doi.org/10.17744/mehc.32.3.q14777j84kx3285x>
- Samuel, C. A., Pinheiro, L. C., Reeder-Hayes, K. E., Walker, J. S., Corbie-Smith, G., Fashaw, S. A., ... & Wheeler, S. B. (2016). To be young, Black, and living with breast cancer: a systematic review of health-related quality of life in young Black breast cancer survivors. *Breast cancer research and treatment*, 160(1), 1-15. <http://dx.doi.org/10.1007/s10549-016-3963-0>
- Sterba, K. R., Burris, J. L., Heiney, S. P., Ruppel, M. B., Ford, M. E., & Zapka, J. (2014). "We both just trusted and leaned on the Lord": a qualitative study of religiousness and spirituality among African American breast cancer survivors and their caregivers. *Quality of Life Research*, 23(7), 1909-1920. <http://dx.doi.org/10.1007/s11136-014-0654-3>
- Von Ah, D., Habermann, B., Carpenter, J. S., & Schneider, B. L. (2013). Impact of perceived cognitive impairment in breast cancer survivors. *European Journal of Oncology Nursing*, 17(2), 236-241. <http://dx.doi.org/10.1016/j.ejon.2012.06.002>
- Williams, F., & Jeanetta, S. C. (2016). Lived experiences of breast cancer survivors after diagnosis, treatment and beyond: qualitative study. *Health expectations*, 19(3), 631-642. <http://dx.doi.org/10.1111/hex.12372>
- World Health Organization (2019), Estimated Number of New Cancer Cases in 2018, Malaysia. Retrieved from <https://gco.iarc.fr/today/data/factsheets/populations/458-malaysia-fact-sheets.pdf>
- World Health Organization. Division of Mental Health. (1996). WHOQOL-BREF: Introduction, administration, scoring and generic version of the assessment: field trial version, December 1996. World Health Organization. <http://www.who.int/iris/handle/10665/63529>

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