

Is Peer Education an Effective Method on Breast Cancers' Patient? A Systematic Review

Diana Pefbrianti¹, Desak Gede Agung Suprabawati² and Esti Yunitasari¹

¹Faculty of Nursing Universitas Airlangga, Kampus C Mulyorejo, Surabaya, Indonesia

²Specialist Oncologist, RSUD Dr. Soetomo Surabaya

Keywords: Peer-education, Breast-cancer, Qol, Knowledge

Abstract: There is increasing interest regarding peer education in healthcare. Peer education is a process of communication, information and education conducted by peers are among groups, fellow colleagues professions, gender. The purpose of this study was to determine the effect of peer education in improving quality of life and knowledge among breast cancers' patient. We identified articles through databases searching: Sage, Proquest, Science Direct and EbscoHost, published between (2006-2016). The ten articles were analyzed and selected from 1540: The studied evaluated that peer education is recommended for the breast cancers' patient to increase their quality of life and knowledge. peer education is suitable method to increase quality of life and knowledge among breast cancers' patient. However many of these studied still lacked of method, so we suggest to the next research using more RCT to get better results.

1 BACKGROUND

Breast cancer is the most prevalent cancer in woman (Stanton 2005). World Health Organization showed that 12 million people around the world had breast cancer and 7,6 million of them death. In Indonesia the prevalence of breast cancer increase about 100 patients from 100.000 people each year. The data from Sistem Informasi Rumah Sakit (SIRS), 2007 showed that breast cancer is the most disease in inpatient ward in hospital (16,8%). Dharmais hospital noted that breast cancer became the most disease occur in 5 years late (32%). In Indonesia, the most prevalence of breast cancer happen in west java and east java.

Based on National Cancer Institute, physic and psychology condition of patients examined at the first diagnoses till the end of her life. Research by (Heydarnejad 2009). This study evaluate 200 breast cancers' patients post chemotherapy, the data showed that 11% patients had a good quality of life, 66% in a immediate and 23% others in a less QOL (Heydarnejad 2009). A research showed that breast cancer and colorectal cancer survivors had limited knowledge of their diagnosis and cancer treatment (Malak, 2009).

A variety of interventions have been made to increase the QOL and knowledge of the breast cancers' patients, pne of the intervention that has been used is peer education. Peer education was rated as one of the effective ways to increase QOL and knowledge in breast cancer cases. The purpose of this study was to determine the effect of peer education in improving quality of life and knowledge among breast cancers' patient.

2 METHODS

We identified articles through databases searching: Sage, Proquest, Science Direct and EbscoHost, published between (2006-2016). Search terms include "Peer education", "Breast Cancer", "Quality of Life", "Knowledge". We found ten articles that suitable with our Inclusion Criteria. Our inclusion criteria are all of the study of peer education for breast cancers' patient that given an impact on QOL and knowledge. We excluded the Articles if the target population focused on other than breast cancer.

Table 1: Table mapping (PICO).

No	Study	Design	Sample	Variable	Instrument	Analysis	Result
1.	Long-Term Effects of <i>Educational</i> and Peer Discussion Group Interventions on Adjustment to Breast Cancer (Vicki S, sheldon cohen dan Richard Schul 2006)	Randomized Controlled trial	Sample: 312 respondents (education group (n=79), peer education group (n=74), kelompok education plus peer education group (n=82) and control group (n=77))	Independent Variables : Education & <i>peer education</i> Dependent Variables Quality of life	SF-36 Health survey	A Repeated-measures analysis of variance	The benefits of educational intervention are maintained over a 3-year period even though the effects disappear over time
2.	Exploring The Effects of Being A Peer Educator on African American Breast <i>Cancer survivors</i> (Melanie J, 2013)	Qualitative research design with grounded theory design	Sample: 35 respondents (breast cancer patients) Sampling Purposive Sampling	Independent Variables: Peer education Dependent Variables 1. Healthy behaviour 2. Healthcare utilization 3. QOL	1. Demographic questionnaire 2. The Quality of Life of Adult Cancer survivors (QLACS)	Statistik deskriptif, a grounded theory methodology	The results showed that all participants had a positive experience on the role of peer educator. It found positive influence of participants in quality of life, health behavior, utilization of health services
.	The Effect of Peer-led Education on The Life Quality of Mastectomy Patients Referred to Breast Cancer-Clinics in Shira, Iran 2009 (Farkhonde	Pre post test with control design	Sample: 99 respondents Sampling Convenient sampling	Independent Variables: Peer-led education Dependent Variables QOL	1. Quality of Life Question (QLQ-30) 2. QLQ-BR23	Chi square, t-test, and repeated measurement multivariate	In the intervention group, there was a significant increase in all aspects of quality of life and decreased symptoms (P <0.001). while the control group there was no

	h Sharif, Narjes abshorshori, Sedigheh Tahmasebi, Maryam Harati, Najaf are, sarah Masoumi, 2010)						significant difference in all aspects of quality of life.
.	Belonging to A Peer Support Group Enhance The Quality of Life and Adherence Rate in Patients Affected by Breast Cancer: A Non-Randomized Controlled Clinical Trial (Afsaneh Melekpour, Iba Farajadegan and Ahmad Rea amani, 2011)	Clinical Controlled Trial	Sample: 68 respondents Sampling Purposive sampling	Independent Variables: Peer support group Dependent Variables 1. QOL 2. Adherence	SF 36 questionnaire	Chi Square test, paired t-test, Independent t-test, MANCOVA and Wilcoxon Signed Rank Test	Providing support to breast cancer patients with explanatory sessions in peer group support methods can improve their quality of life (p <0.001).
.	Peer-Based Models of Supportive Care: The Impact of Peer support Groups in African American Breast Cancer Survivors (kimlin ashing-giwa, Carolyn Tapp, Monica rosales <i>et al.</i> 2012)	A qualitative research study	Sample: 62 respondents	Independent Variables: Peer support group Dependent Variables 1. Demographics 2. Medical story 3. Support group impact 4. Adherence	Questionnaire	Descriptive and univariate statistics	Survivors recognize that cultural-based learning with peers comes from the spiritual, linguistic, experiential and historical aspects. Peer-based support groups offer many benefits to emotional, social, spiritual, information and cultural support.

	Group Support Interventions for Women with Breast Cancer: Who Benefits From What? (Vicki S, Sheldon Cohen, Richard Schul, Joyce Yasko, 2006)	Randomized Controlled trial	Sample: 230 respondents	Independent Variables: 1. Peer Education 2. Peer discussion group Dependent Variables 1. Emotional support 2. Negative interaction 3. Support information about cancer 4. Self resources	SF-36 questionnaire	Multiple-regression analysis	Educational groups show better results in terms of physical function, peer discussion groups are helpful to women who lack support from colleagues or psychologists
7.	The effect of breast cancer <i>educational</i> intervention on knowledge and health beliefs of woman 40 years and older, Isfahan, Iran (Mohsen Rezaeian, Gholamreza Sharifirad, Firoozeh Mostafavi et al, 2014)	Randomized controlled trial	Sample: 290 respondents (145 intervention group and 145 control group) Sampling Simple random sampling	Independent Variables: Breast cancer <i>educational</i> intervention Dependent Variables 1. Knowledge 2. Health belief	Champion's health belief model scale (CHBMS)	Analisa deskriptif, chi-square, t-test, paired t-test	The average score of perceived vulnerability, perceived severity, perceived benefits, obstacles and benefits of mammography and Health motivation in the intervention group had significant comparison differences with the control group after educational intervention ($P \leq 0.001$).
8.	Effectiveness of Peer Education for Breast Cancer Screening and Health Beliefs in Eastern Turkey (Sebahat Gozum,	Randomized controlled trial	Sample: 5000 respondents Sampling Simple random sampling	Independent Variables: Peer education Dependent Variables 1. Knowledge 2. Health belief 3. Practice	Champion's health belief model scale (CHBMS) & Cancer Early Diagnosis and Screening Centers Data for Mammography Practice	t-test, paired t-test	Peer education is effective to increase knowledge, confidence and practice in breast cancer patients

	Ozgul Karayurt, Sultan Kav, 2010)						
9.	Effects of Peer Education on The Knowledge of Breast Cancer and Practice of Breast Self-Examination Among Mansoura University Female Students (Heba Salama, Nahed Elsebai, Fardos Abdelfatah <i>et al.</i> , 2013)	Quasy experimental design	Sample: 150 respondents Sampling Simple random sampling	Independent Variables: Peer education Dependent Variables Knowledge	Knowledge of breast cancer and BSE form & Breast self examination performance checklist	t-test	There was a significant increase in female students' knowledge of breast cancer and BSE, improved practice in BSE (p = 0.000)
10	Effects of Peer education, Social Support and Self Esteem on breast Self Examination Performance and Knowledge Level (Arzu Tuna M, Murat Bektash, Ayshe San T <i>et al.</i> , 2009)	Quasy experimental design	Sample: 65 respondents Sampling Simple random sampling	Independent Variables: Peer education, social support and self esteem Dependent Variables Knowledge	Kuesioner for the coopersmith self-esteem inventory and scale of perseivedsocial support	Paired t test, Mc Nemar test and Pearson	The level of knowledge and practice of BSE increased in peer support intervention (p <0.001)

3 RESULTS

Articles reviewed include; 5 Randomized Controlled Trial, 2 Qualitative research, 2 Quasy Experiment, and 1 pre post with control design. According to the level of evidence, 10 articles are in 1-6 levels from 7 level of evidence, level 1 (5 articles), level 3 (3 articles) & level 6 (2 articles). Study reviewed deriving from 3 countries; USA (5 studies), Iran (4 studies), and Carolina (1 study). Spain (1 study).

Ten articles that have been collected, analyzed and scored, obtained the following results. Research conducted by (Helgeson, 2006) aimed to follow up the effects of 8 week support group intervention on the QOL of woman in early stage breast cancer. On the results obtained that the benefits of this intervention remained over a 3 year period (Helgeson, 2006). In the meantime research conducted by Boyd (2013) was to determine the effects of being a peer educator, the results of the research show that participants in the intervention group had a positive influence of their quality of life, health behaviours and healthcare utilization.

A study found to evaluate the effect of peer-led education on the QOL of mastectomy patients, the research showed that statistically significant increasing in all aspects of QOL and decrease the symtom ($p < 0.001$) (Sharif, 2010).

The study by Tehrani (2011) Aims to see the effect of peer support and educational program on QOL in breast cancer patients. The results showed that intervention group was significantly higher than that of the control group ($p < 0.001$). Research by Ashing-giwa (2012) aims to evaluate the effect of support group on African American breast cancer survivors. The result showed that the survivors underscored that cultural based groups are rooted in the linguistic, spiritual, experiential, and historical. The peer based support groups had many functions, such as social, emotional, spiritual, informational, and financial support.

Research conducted by Helgeson (2006) aimed to evaluate the impact of an educational group and peer discussion group on the physical and mental functioning of breast cancers' patients. The data showed that peer discussion groups were helpful for woman who lacked support from their partners or physicians ($p < 0.001$).

A research intended to know the effect of breast cancer screening education using HBM on knowledge and health beliefs. The results of the research showed that a significant differences in comparison between the experimental group with the control group after intervention ($p \leq 0.001$) (Rezaeian, 2014).

Research by (Gozum, 2010) aimed to evaluate the efficacy of peer education in breast cancer screening and health beliefs. The results of the study showed a significant increase of knowledge, beliefs and practice on breast cancers' patients ($p < 0.001$). Research by Salama (2013) aimed to evaluate the peer education for breast cancer patient's knowledge and practice of BSE. The data showed an increase in knowledge about their ill and practice of BSE ($p = 0.000$).

Research of Nissen (2012) aims to know the difference efficacy of peer education, social support and self esteem on BSE and knowledge level. The data showed that there is a significant increase in knowledge level and BSE practice in peer support group ($p < 0.001$).

4 DISCUSSION

The studies examined in this systematic review were about evaluation of the peer education on breast cancers' patient. Research by Heydarnejad (2009), evaluate 200 breast cancers' patients post chemotherapy, the data showed that 11% patients had a good quality of life, 66% in a immediate and 23% others in a less QOL. A study showed that breast and colorectal cancer survivors had limited knowledge on the details of their diagnosis and cancer treatment (Malak, 2009). In this case the role of nurse is important in primary, secondary and tertiary prevention to avoid complication. At the level of primary care nurse can implement health education intervention, one of them is peer education.

Breast cancer patient need a forum that is responsive to their physical, psychosocial, spiritual and information (Coward, 2005). Therefore, peer education can be attributed to the recognition of the breast cancer need. The peer education group member underscored that the groups were roted in the essential experiential, linguistic, spiritual.

Peer support is important for the breast cancer patient during the treatment, postdiagnostic, emotional, and informational. Therefore, member felt they were in a comfort zone by being able to relate to other members with similar condition. A study identified that breast cancer support group members benefited from the therapeutic and were able to articulate their breast cancer journey by allowed an acceptance and strength in their goals. Therefore, their experience, support and practices are revealed in decreasing emotional and they have

given permission to share their cancer journey (Ashida, 2008).

5 CONCLUSIONS

This study evaluated the peer education on Breast Cancers' Patient. The 10 studies reviewed, 5 indicates that the peer education effective to increase the QOL among breast cancers' patient. The five other studies showed an increase in the knowledge.

Majority of ten studies showed significant positive effects on quality of life and knowledge. The journals research by Melanie (2013), showed that the peer education had a positive influence of quality of life, health behaviours and healthcare utilization. Future expected that RCT studies should continue to be done to find out the actual effect and to avoid bias.

REFERENCES

- A, Malak. 2009. "Effect of Peer Education, Social Support and Self Esteem on Breast Self Examination Performance and Knowledge Level." *Asian Pacific Journal of Cancer Prevention* 10: 605–8.
- Ashida, S., & Heaney, C.A. 2008. "Differential associations of social support and social connectedness with structural features of social networks and the health status of older adults". *Journal of Aging and Health*, 20, 872–893. doi:10.1177/0898264308324626
- Ashing-giwa, Kimlin et al. 2012. "Peer-Based Models of Supportive Care: The Impact of Peer Support Groups in African American Breast Cancer Survivors." 39(6): 585–92.
- Boyd, A Suzanne et al. 2013. "EXPLORING THE EFFECTS OF BEING A PEER EDUCATOR ON AFRICAN AMERICAN BREAST CANCER SURVIVORS by Melanie J . Rouse A Dissertation Submitted to the Faculty of The University of North Carolina at Charlotte in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Health Services Research Approved by :"
- Coward, D.D. 2005. "Lessons learned in developing a support intervention for African American women with breast cancer". *OncologyNursing Forum*, 32, 261–266. doi:10.1188/05.ONF.261-266
- Helgeson, Vicki S, Sheldon Cohen, and Joyce Yasko. 2006. "Group Support Interventions for Women With Breast Cancer : Who Benefits From What ?" 19(2).
- Heydarnejad. 2009. "Factors Affecting Quality of Life in Cancer Patients Undergoing Chemotherapy." <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3158510/pdf/AFHS1102-0266.pdf>>.
- M, Nissen. 2012. "Breast and Colorectal Cancer Survivors' Knowledge about Their Diagnosis and Treatment." *Journal Cancer Survivor* 6: 20–32.
- Rezaeian, Mohsen et al. 2014. "The Effects of Breast Cancer Educational Intervention on Knowledge and Health Beliefs of Women 40 Years and Older .," 3(April). <https://doi.org/10.4103/2277-9531.131929>
- S, Gozum. 2010. "Effectiveness of Peer Education for Breast Cancer Screening and Health Beliefs in Eastern Turkey." *Cancer Nursing* 3(33): 213–20. <https://doi.org/10.1097/NCC.0b013e3181cb40a8>.
- Salama. 2013. "Effect of Peer Education on The Knowledge of Breast Cancer and Practice of Breast Self Examination Among Mansoura University Female Students." *Journal of American Science* 9(10): 253–61.
- Sharif, Farkhondeh et al. 2010. "The Effect of Peer-Led Education on the Life Quality of Mastectomy Patients Referred to Breast Cancer-Clinics in Shiraz , Iran 2009." : 1–8.
- Stanton. 2005. "Outcomes From The Moving Beyond Cancer Psychoeducational." *Journal Clinical Oncology* 23(25): 6009–18.
- Tehrani, Afsaneh Malekpour., Farajzadegan, ziba., zamani, Ahmad Reza. 2011. "Belonging to A Peer Support Group Enhance The Quality of Life and Adherence Rate in Patients Affected by Breast Cancer: A Non Randomized Controlled Clinical Trial." *Journal of Research in Medical Sciences* 16(5): 658–65.
- Yayasan Kanker Indonesia, Pusat Data Dan Informasi Kanker Payudara. 2015. Jakarta.
- Wood, G. L. & Haber, Judith. 2010. "Nursing Research – Methods and Critical Appraisal for Evidence-Based Practice. 7th ed. Elseiver. China.