



## ความสัมพันธ์ด้านแรงสนับสนุนทางสังคม กับการเข้าการรักษาด้วย เคมีบำบัดอย่างต่อเนื่องในผู้ป่วยมะเร็งเต้านมเพศหญิงใน โรงพยาบาล เขตชวากลาง ประเทศอินโดนีเซีย\*

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### บทคัดย่อ

การวิจัยเชิงพรรณานี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างปัจจัยด้านแรงสนับสนุนทางสังคมกับการเข้ารับการรักษาดูแลด้วยเคมีบำบัดในผู้ป่วยมะเร็งเต้านม โดยศึกษาในผู้ป่วยมะเร็งเต้านมเพศหญิงชาวอินโดนีเซีย ที่เข้ารับการรักษาดูแลด้วยวิธีเคมีบำบัดครบถ้วนตามโปรแกรมการรักษา ในตึกผู้ป่วยนอกโรงพยาบาล Margono Soekardjo Purwokerto (MSP) เขตชวากลาง ประเทศอินโดนีเซีย ดำเนินการเก็บรวบรวมข้อมูลระหว่างเดือนตุลาคมถึงเดือนธันวาคม พ.ศ. 2558 วิเคราะห์ข้อมูลโดยใช้สถิติแมนน์เคนเดลทอว์ (Mann-Kendall Tau Test) ในการทดสอบความสัมพันธ์ระหว่างปัจจัยด้านแรงสนับสนุนทางสังคมกับการเข้ารับการรักษาดูแลด้วยวิธีเคมีบำบัดในผู้ป่วยมะเร็งเต้านม

ผลการศึกษาค้นคว้า พบว่า ปัจจัยด้านแรงสนับสนุนทางสังคม ได้แก่ มิติด้านแรงสนับสนุน ด้านอารมณ์ มิติด้านความเป็นรูปธรรม มิติด้านการให้คุณค่า และมิติด้านการมีปฏิสัมพันธ์ทางบวก มีความสัมพันธ์กับการเข้ารับการรักษาด้วยเคมีบำบัดอย่างมีนัยสำคัญทางสถิติ ( $p = .008$ ;  $p = .009$ ;  $p = .031$ ;  $p = .002$ ) แต่มิติด้านข้อมูลไม่มีความสัมพันธ์กับการเข้ารับการรักษาด้วยเคมีบำบัดในผู้ป่วยมะเร็งเต้านมแต่อย่างใด ( $p > .05$ )

จากผลดังกล่าวสรุปได้ว่าปัจจัยด้านแรงสนับสนุนทางสังคมในมิติด้านอารมณ์ ด้านความเป็นรูปธรรม มิติด้านการให้คุณค่า และมิติการมีปฏิสัมพันธ์ทางบวกเป็นปัจจัยที่สำคัญต่อการเข้ารับการรักษาด้วยเคมีบำบัดในผู้ป่วยมะเร็งเต้านม ดังนั้นพยาบาลควรมุ่งให้การช่วยเหลือ และสนับสนุนในการเข้ารับการรักษาด้วยเคมีบำบัดโดยเน้นที่ปัจจัยด้านแรงสนับสนุนทางสังคมในด้านต่าง ๆ ดังกล่าว เพื่อนำไปสู่การรักษาด้วยเคมีบำบัดอย่างต่อเนื่อง

**คำสำคัญ :** แรงสนับสนุนทางสังคม ผู้ป่วยมะเร็งเต้านมอินโดนีเซีย การรักษาดูแลด้วยเคมีบำบัด

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## Social Support and Chemotherapy Adherence among Women with Breast Cancer in A Selected Hospital, Central Java, Indonesia\*

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### Abstract

This descriptive study aimed to examine the correlations between social support dimensions and chemotherapy adherence among 134 Indonesian women with breast cancer who undergone chemotherapy for complete cycles in the oncological unit of Outpatient Department (OPD), Margono Soekardjo Purwokerto (MSP) Hospital, Central Java, Indonesia. Data were collected during October to December 2015. Mann-Kendall Tau Test ( $\tau$ ) analysis was carried out to examine correlations between social support dimensions and chemotherapy adherence.

Results showed that there were correlations between emotional support, tangible support, appraisal, positive interaction support and chemotherapy adherence ( $\tau = .227, p = .008$ ;  $\tau = .221, p = .009$ ;  $\tau = .183, p = .031$ ;  $\tau = .262, p = .002$ , respectively), whereas, there was no correlation between informational support and chemotherapy adherence ( $p > .05$ ). Emotional, tangible, appraisal and positive interaction support can be establishing factors to get women with breast cancer adhere to chemotherapy. Nurse efforts to enhancing social support need to be focused so that chemotherapy adherence can be improved to a satisfactory level.

**Keywords** : social support, indonesian women with breast cancer, chemotherapy adherence

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## Introduction

Breast cancer is the most common cancer in women worldwide, especially in developing countries, where most cases are diagnosed in the advance stage.<sup>1</sup> In Indonesia, breast cancer is the first rank of all cancer types among women with the total number of 61,680 cases (18.26% out of 337,792 cancer cases). The highest number of breast cancer was found in Central Java with the total number was 11,511 cases (Data from Research and Development of Human Resources and Basic Health Research of Indonesia).<sup>2</sup> Chemotherapy is one of the most commonly taken treatment because drugs are very sensitive to breast cells. Breast cancer patients should keep chemotherapy cycles on the schedule in order to obtain the maximum benefit.<sup>3</sup> However, several studies in Indonesia reported that more than 50% of breast cancer patients did not adhere to chemotherapy.<sup>4,5,6,7</sup>

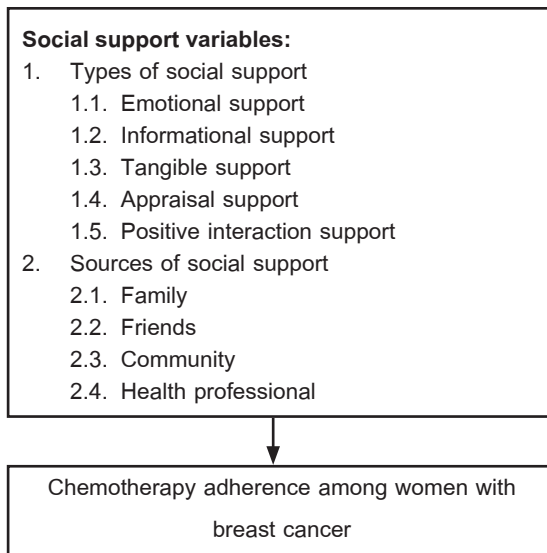
The role of family and environment is very important in decision making and motivating patients to undergo chemotherapy.<sup>8</sup> The support can be given the material and moral. The lack of support can make patients being under stress and decided to stop treatment.<sup>8</sup> Relating to Indonesian context where the extended and multigeneration family have been apparent, the role of family and the environment is very important in decision making and motivate patients to undergo chemotherapy.<sup>9</sup>

Numerous studies, both in Indonesia and other countries have focused on treatment adherence. based on five dimensions which interacting to be the factors affecting the treatment of non-adherence are: socio-economic-factors<sup>10,11</sup> therapy-related factors,<sup>12</sup> patient-related factors,<sup>13</sup> health-related factors,<sup>14</sup> and health care systems/health-related teams as recommended by the world health organogram.<sup>15</sup> Up to present, there are eight published studies about the chemotherapy adherence in Indonesian women with breast cancer.<sup>16,17</sup> Although there are a few studies relating to chemotherapy adherence, there has been

no research about the types of social support, including the sources of support on chemotherapy adherence among breast cancer patients.<sup>18</sup>

Based on the researcher's observation and interviews with ten nurses and ten patients in Chemotherapy Unit of Margono Soekarjo Purwokerto (MSP) Hospital, the nurses reported that through their collected statistics, there was one out of five women with breast cancer who were not adhere to chemotherapy. Some of the reasons given by nurses and patients, such as economic factors; worrying about the side effects of chemotherapy; shame; lack of supports from family or spouse or their community; distance from home to the hospital; did not have their own transportation; did not have money; no one who accompanies them to go to the hospital; and their family were not concerned about the illness, especially for reminding them to chemotherapy. Some of these problems can exert some impact on the psychological of patients, thus support from people around them are needed to keep then having positive thinking on chemotherapy.

From on the phenomena above, there is a need to conduct the study related to the types of social support that received and chemotherapy adherence among women with breast cancer in Indonesian setting where the researcher work. This study used social support as described and categorized by WHO as previously stated i.e., emotional, tangible, information, appraisal and positive interaction support; and sources of social support. Thus, the researcher had chosen sources of social support as significant factors contributing to chemotherapy adherence. MSP Hospital was chosen to be a study site because it is the referral hospital from various health care center in the Southwestern region of Central Java where the incidence of breast cancer increases every year and with a number of breast cancer patients as high as 1,798 patients from January to December 2014. This study aimed to examine the correlations between social support dimensions and chemotherapy adherence.



**Figure 1** The Research Conceptual framework

## Material and methods

**Design:** This cross-sectional descriptive study was conducted during October to December, 2015 in the oncological unit of Outpatient Department (OPD), Margono Soekardjo Purwokerto (MSP) Hospital, Central Java, Indonesia. The sample size was determined a standard formula for known population size for a correlation study with a confidence interval at 1.96, estimation proportion at 0.438 and absolute error at 10% resulting in a sample size of 134 women with breast cancer. With purposive sampling technique, 134 women with breast cancer who undergone chemotherapy were participated in this study. The subjects was recruited and selected based on the criteria that were carefully considered, inclusion criteria were as follows: 1) women with breast cancer who registered as patients in MSP Hospital who were; 2) age 18 years and above; 3) started intravenous chemotherapy during January through December 2014; 4) coming for follow up in the surgical oncology clinic OPD of MSP hospital; 5) having communicated well using Indonesia language (bahasa Indonesia); 6) did not psychiatric problems as indicated by Doctor and

7) are willing to participate in the study. Exclusion criteria was patients who had been taking oral chemotherapy would be excluded from this study.

**Procedures:** This study was approved by the Institute Review Board (IRB), Khon Kaen University, Thailand with record No. 4.3.01: 37/2015 and reference No. HE582237. Data were collected during October to December 2015 using self-administered questionnaire. The researcher met respondents who were queuing for check-up; informed the study, objectives, benefits, and the technical process of filling up the questionnaires of the study. Women who agreed to participate completed a consent form, then were asked to complete a questionnaire at their own pace under supervision of the researcher.

**Measurement:** The instruments were used consist of two sections. First, questionnaire modified of Social Support Breast Cancer Assessment Scale (BC-SSAS), including emotional, informational, tangible, appraisal, and positive interaction consisted of 42 item of likert scale. BC-SSAS modification compilation is based on original instruments that have been used in previous studies.<sup>19-21</sup> Chemotherapy adherence was interpreted based on data obtaining in the medical record. The definition of chemotherapy adherence was completion of all courses of chemo therapy as prescribed in the medical regimen.

**Validity and reliability:** The instruments were processed by three bilingual translators using a back-translation technique. **Breast Cancer Social Support Assessment Scale (BC-SSAS)** was constructed and evaluated by five experts for clarity and appropriateness. The results showed that for content validity, I-CVI was 0.98 and S-CVI was 0.98. Cronbach's alpha value was 0.971 and the Cronbach's alpha coefficients for emotional, informational, tangible, appraisal, and positive interaction were high (0.903; 0.865; 0.901; 0.897; 0.884; respectively).

**Statistical analysis:** Mann Kendall Tau Test was used in this study to find the correlations between dimensions of social support (including emotional, informational, tangible, appraisal, and positive interaction)



and chemotherapy adherence with the statistical significant level established at  $\leq 0.05$ .

## Results

### 1. Correlations between social support and chemotherapy adherence

There are five types of social support (SS), consist of emotional support (SS1;14 items), informational

support (SS2;8 items), tangible support (SS3;8 items), appraisal support (SS4;6 items), and positive interaction support (SS5;6 items). Results of this study reported the correlation between social support and chemotherapy adherence of women with breast cancer using *Mann-Kendall Tau Test* with a determined significant level at 0.05 ( $p$  value  $\leq .05$ ). The analysis of the correlation are presented as below:

**Table 1** Correlations between social support and chemotherapy adherence among women with breast cancer using *Mann-Kendall Tau Test* ( $\tau$ ) (n = 134)

Types of Social Support	$\tau$	p value
SS1	0.227	0.008*
SS2	0.165	0.055
SS3	0.221	0.009*
SS4	0.183	0.031*
SS5	0.262	0.002*
SS total	0.285	0.001

\*level of significant at  $p \leq 0.05$

In accordance to Table 1, there was a correlation between SS total and chemotherapy adherence ( $p = 0.001$ ). Four variables that had significantly correlated with chemotherapy adherence were SS1, SS3, SS4 and SS5 ( $p$ -value = .008; .009; .031; and .002;) respectively; There was no correlation between SS2 and chemotherapy adherence.

### 2. Sources of social support

Sources of social support were obtained by calculating the total responses given by 134 of study sample from each dimensions which are items thus each dimension has a different total responses.

**Table 2** Frequency and percentage of sources of social support in the study sample (n=134)

Social Support Dimensions	Sources of Social Support (Frequency & Percentage)							Total Respons
	No Sources (No onc)	Family	Friends	Community	Peer Group	Doctor	Nurses	
Emotional	372 (19.3)	1192 (63.5)	164 (8.7)	128 (6.8)	4 (0.2)	8 (0.4)	8 (0.4)	1876
Information	135 (12.6)	368 (34.3)	134 (12.5)	117 (10.9)	53 (4.9)	133 (12.4)	132 (12.3)	1072
Tangible	222 (20.7)	734 (68.5)	35 (3.3)	75 (7.0)	0 (0.00)	0 (0.00)	6 (0.5)	1072
Appraisal	151 (18.8)	498 (61.9)	72 (9.0)	37 (4.6)	11 (1.4)	4 (0.5)	31 (3.9)	804
Positive Interaction	221 (27.5)	508 (63.2)	51 (6.3)	17 (2.1)	5 (0.6)	1 (0.1)	1 (0.1)	804



The results regarding sources of social support in each domain revealed family as the highest source (63.5% of emotional support; 34.3% of information support, 68.5% of tangible support, 61.9% of appraisal support; and 63.2% of positive interaction support) for women with breast cancer who undergone chemotherapy. They got the highest responses of emotional and information support (63.5% & 34.3%) from family and only 0.2% & 4.9% from peer group. Then, the responses of tangible support receiving from family was 68.5% and it was not obtained from peer groups and doctors at all (0.00%). However, it is noted that some significant numbers of women had no supports from any sources.

## Discussion

Social support is essential for life and refers to the actions that we perform to give or get help. Social support helps to reduce individual stress. Social support can be supplied in various types such as emotional, informational, tangible, appraisal and positive interaction support.<sup>22-24</sup> Social support has a positive effect on health outcomes and quality of life.<sup>25</sup> The success or effectiveness long-term treatment adherence in patients under treatment is determined by social support.<sup>26</sup> Results of previous study reinforces this study resorts that there were relationships between social support and chemotherapy adherence in cancer patients undergoing chemotherapy.<sup>26,27</sup>

Not only emotional support for women with breast cancer is needed, but the information needs is very important for them. Women with breast cancer need information regarding the risk of developing breast cancer, the effectiveness of treatment, the side effects of treatment, sexuality and body image. Therefore, women started looking for information about cancer and treatments from many sources. Good communication between doctors, nurses and patients is also very helpful in achieving complete adherence to therapy, helping patients to understand health information and being able to take a decision to act in good health. Providing information for

patients to adhere to their therapy is important and needs to be improved on family and friends side. There were some previous study in line with the results of this study which states that there is no correlation between informational support and chemotherapy adherence<sup>28</sup> however, such results did not reduce the importance of information support. In addition, patient's educational level was also a factor in the process of obtaining information about the disease and treatment.<sup>14</sup> Thus, simplifying the content of information give is essential and should be appropriate for patient educational background.

Tangible supports as the third dimensions of social support was important for the treatment and quality of life of women with breast cancer. When women with breast cancer receive less support from their friends and family members, health care providers can help them further Emotional, tangible, appraisal and positive interaction support were also correlated with chemotherapy adherence among breast cancer women. There was a strong correlation between positive interaction support and chemotherapy adherence among women with breast cancer. Positive interaction support that they received and perceived was the presence of someone with willingness to cheer up, listen attentively, and happily spending time with. The results of analysis in this study that there are positive activities and having fun with the people around women with breast cancer can influence motivation and hope for recovery.<sup>29</sup>

Related to sources of social support, this study found that family was the highest source of social support for women with breast cancer. Several previous studies have supported these results<sup>30-32</sup>. This finding confirmed that family as one of the key factor for success in improving adherence. Families especially woman's spouse was reported as a major source of emotional support<sup>9</sup>.

## Limitation and Recommendation

Several suggestions for further research that could be considered: 1) There were several sensitive



questions, e.g., financial constraints and caretakers. Thus, qualitative studies can be carried out by researchers to obtain information based on lived experience of women with breast cancer who are undergoing chemotherapy; 2) Conducting more research studies among women with breast cancer to investigate the factors relating to low perceived social support and 3) similar studies can be conducted in different setting and context to determine the significance of social supports upon the optimal level of health attainment for chronic nature of diseases and patients.

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