

**THE QUALITY INDICATORS OF A HEALING GARDEN THERAPY PROGRAM IN INDONESIAN HOSPITALS USING MODIFIED RAND DELPHI METHOD**

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**ABSTRACT**

*Hospitalized patients particularly who facing uncertainty condition experience both physical and psychological problems associated with illness. Creating a healing environment is one of the goal of caring in order to support healing process. Healing Garden Therapy Program (HGTP) is an important program could be developed to support patient's healing process. The purpose of the study was to develop quality indicators of a HGTP in Indonesian hospitals. A Modified two-round RAND Delphi procedure was conducted between January and April 2019 at two private hospitals. The panelist were chosen purposively. The Delphi method utilized semantic scale consisting of nine points. In the first round, twenty panelists from different professionals and patients were involved to rate the appropriateness of the 65 potential quality indicators. In the second round, eighteen panelists were rated the 26 potential quality indicators. A total of eighteen panelists considered of the 64 quality indicators face-valid. Panelist were considered majority of the items in quality indicators with strong agreement. The quality indicators were divided into 25 of structure indicators, 15 of process indicators, and 24 of outcome indicators. We developed 64 quality indicators of Healing Garden Therapy Program in Indonesian hospitals, and we suggest it to be testing/piloting in many different kind of hospitals.*

**Keywords:** *RAND Delphi, Indonesia, healing garden therapy program, quality indicators, caring, holistic*

## INTRODUCTION

One of the missions of a hospital is to provide quality health services affordable to a community in order that it can improve the health status of the community by prioritizing patient safety (Law of the Republic Indonesia Number 44 of 2009) about hospital. Therefore, hospitals must meet the requirements of location, building, infrastructure, human resources, and equipment. Likewise, the Joint Commission on Accreditation of Hospitals (JCAH) provides a requirement that patient and visitors should have opportunities to contact nature. (JCAHO, 2009). Indonesian Minister of Health Regulation No. 24 of 2016 emphasizes that the hospital must provide a garden as a preservation area for healing. The area is at least 15% of the total land area of the hospital property.

Healing Garden (HG) is an evolving concept, that is gaining popularity today (Pouya et al. , 2016) that involves the holistic healing for the patients in a hospital (Vapaa, 2002). Associated with the duties of nurses, the development of the Healing Garden Therapy Program (HGTP) is important. Besides it is able to optimize the existence of a garden around the hospital as well as to realize the holistic services for patients.

People need hospital services commonly because of experiencing various health problems both physically and psychologically.(Effendy, 2015) Hospitalized patients experience substantial stress like pain and other pressures associated with illness. Patients' stress has a variety of manifestations that work against wellness which are physiological, psychological, and behavioral (Ulrich, 2015). In addition, disease conditions in the hospital environment can affect the quality of life of the patients.

For this reason, a health care team should be aware about the problem and the needs of the patient personally. (Effendy et al., 2015) Patient-Centered Care (PCC) can be the best approach to meet this issue (Revnold, 2009). Especially, the presence of nurses is needed to explain various things and make patients feel comfortable while in the hospital. As a professional, nurses should be able to understand the

need of the patients in order to enhance their quality of life.(Effendy et al.,2015)

## **Literature Review**

Watson (2008) recognizes that nurses must be able to understand carative factor in carrying out “caring”, and should have a role in creating a healing environment at all levels (physical as well as non-physical), subtle environment of energy and consciousness, whereby wholeness, beauty, comfort, dignity, and peace are potentiated. Likewise, Roger’s theory (1970) is known as the Science of Unitary Human Being. According to her, humans are seen as integral to the universe. Human as a whole and environment are one, not dichotomous. She argues that nursing focuses on humans and the manifestations that arise from the human and shared environment process. On the other hand, the Theory Restorative by Ulrich (1999) indicates that the basic principle of the theory revalued around four dimensions that the garden provides: social support, sense of control, physical movement and exercise, and access to nature and other positive distraction.

Healing Garden Therapy Program is one of the ways of healing by collecting the patients in the garden for the purpose of spiritual therapy, refreshing of the mind, and increasing the motivation to heal in a comfortable and joyful situation. Therefore, patients who experience acute stress can experience significant recovery will ultimately improve the health outcome. Many studies have found that Healing Garden Therapy can contribute to healing such as physical, psychological, social, and spiritual (Hutton and Richardson, 1995; Ulrich, 2007; Toone,2008)

Hospitalized patients who experience with the opportunity to looked into the garden through the window, had a shorter length of stay, fewer complications, less using of antibiotics and pain killers, and get a more positive response seen from the nurses’ notes than those in the rooms facing the wall (R S Ulrich, 2007). The healing garden also contribute to reduces the stress of parents of hospitalized pediatric patients. Toone (2008). Barello and colleagues found that the positive experience of therapeutic gardening as a protected self-expression

space, a boost for self-efficacy and a bridge between the hospital environment and the outside world (Barello, Serena, Graffigna, Guendalina, Menichetti, Julia, Sozzi, Matteo, Savarese, Mariarosaria, Bosio, Cladio, A., & Corbo, 2016). A therapeutic garden also effective to reduce stress-related diseases and contribute to be natural help therapy in the rehabilitation program (IVarsson, C.T. & Grahn, P. (2016)

Evaluation of service quality is the key to ensuring that patient needs are met and determining interventions that must be carried out to improve services (Foebel, et al., 2015). One way to identify the good / bad service is to use quality indicators that can indicate the presence or absence of potential poor service.

There is only few hospitals in Indonesia have a Healing garden program. Yet, the program has no standard for the quality of the program.

Panti Rapih hospital in Yogyakarta and St Carolus hospital are two of some hospitals have garden and it is used for Healing Garden Therapy Program (HGTP) for hospitalized patients. This program is held every Saturday. In addition, the hospital does not have a standardized program because the program presented to patient still varies depending on the cultivity of which unit is leading like the program at the time. In both hospitals, the patients' experienced that by participating in a HGTP, they felt that they received holistic care. (Hastuti, 2017)

There is limited study has been found specifically due to quality of indicators of the Healing Garden Therapy Program for patients in hospitals. Therefore, the researcher wants to contribute in developing nursing science by making a study that will help develop a Healing Garden Therapy Program that can be applied in hospitals and adopted to local culture. In this study, the researcher developed quality indicators of a Healing Garden Therapy Program in Indonesian hospital using Modified Delphi method that included two (2) rounds.

## METHODOLOGY

The study design used the Modified two-rounds RAND Delphi method to measure of expert's consensus. The Delphi method utilized semantic scale consisting of nine points. It was applied as a tool and method for consensus building using a series of questionnaires to collect data from a panel of selected participants (Habibi et al., 2014; Lindeman, 1975 as cited in Freitas, 2015). The Delphi method is a research approach to gain consensus using a series of questionnaires and the provision of feedback to participants who have expertise in the key areas (Habibi, Sarafrazi, & Izadyar, 2014; Hsu & Ohio, 2007, Levy, 2018). The research questions and aims in Delphi studies must have direct bearing on informing practice, policy, or decision making (Brady, 2015). Furthermore, Thangaratinam & Redman, (2005) discussed that Delphi is used as a means of actually producing the guidelines, particularly when the available evidence is insufficient or conflicting. From January to April 2019, data were collected by a researcher at two private hospitals in Indonesia.

The participants (panelist) were chosen purposively. In first round, twenty panelists from different professionals and patients were involved to rate the appropriateness of the 65 potential quality indicators. In the second round, eighteen panelist were rated the 26 potential quality indicators.

### *Modified RAND Delphi Method*

Round I. The Delphi technique questionnaire had 65 items with semantic scale consisting of nine points starts with very negative (1) until very positive (9). The survey was conducted via online. The researcher sent 65-item questionnaire to 21 participants individually. However, only 20 filled up questionnaire were retrieved. The survey was conducted via online, by sending the Google form of the questionnaire through email and whatsapp. The next is the data analysis, After received experts' answer, the researcher computed the data and sorted out the experts' answers which included high rating (7, 8, 9), which were considered valid, the median (4, 5, 6) and low rating (1, 2, 3), which would be revised based on the experts' recommendation. In

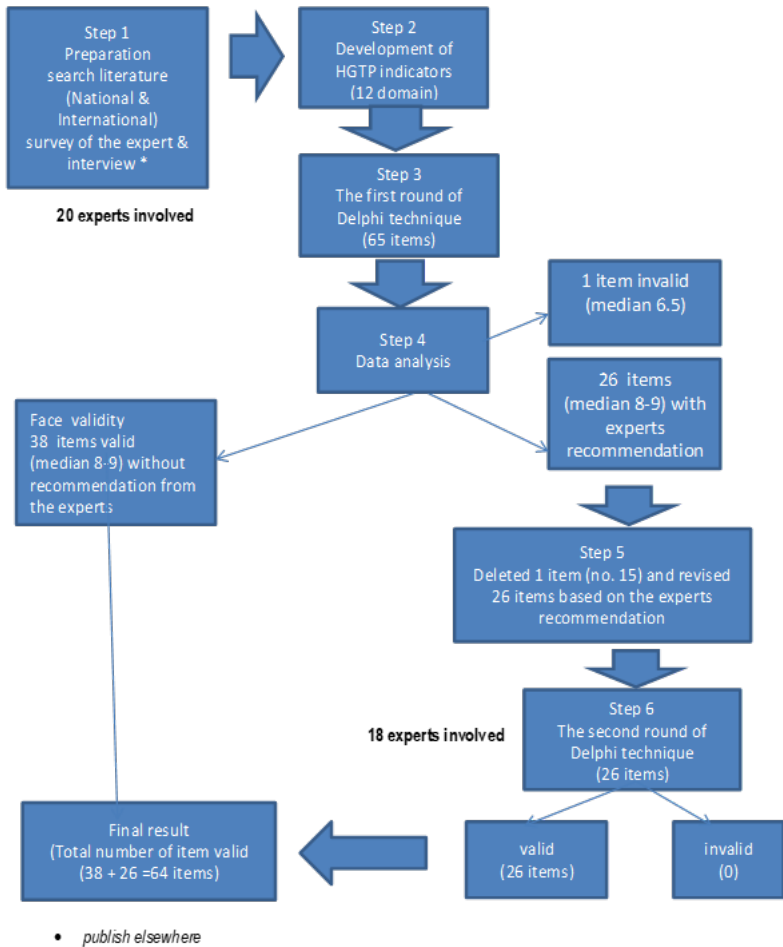
the first round with the median 8-9, we indicated 38 of 65 indicators were face valid without comments from the experts, and only one indicator indicated invalid with median 6.5. In this round, there were 26 indicators with comments from the experts and we decided those indicators should be re-rate in the second round. Researcher revised the 26 indicators with note that 1 indicator (number 15) was deleted, then four indicators (number 19 & 20), and number 23 & 24) were combined because of their similarity meaning, and the revised for 24 indicators, and two new indicators were added based on the participant's comments. This stage, the participants had chosen between point one (very negative) to point nine (very positive) according to the opinion. Then, development of the revised questionnaire related to the Healing Garden Therapy Program. The questionnaire had 26 items. It also had the same nine-point semantic scale. The survey was conducted via online, by sending the Google form of the questionnaire through email and WhatsApp.

Round II. The researcher conducted the gathering of experts' opinion related to the finalization of the indicators regarding the Healing Garden Therapy Program in the hospital. After received the participant's answers, the researcher computed the data and sorted out the participants answers which included high rating (7, 8, 9), which again will be considered valid, the median (4, 5, 6) and low rating scores (1, 2,3) were deleted.

The responses from experts which are considered as valid are those with 7, 8, and 9 (from points 1-9 of the semantic scale) in step 3 and 6. After the retrieval and the processing of the data, there are 64 indicators valid with categorical median of 8.39 (Appropriate).

The items where there is a consensus already are the items where the participants have agreed (7-9). The consensus is considered complete if there are 70% of all items declared valid in the last two rounds and without recommendation from the experts. This is in accordance with Sumsion (1998) who suggested a response rate of 70% for each round in order to sustain accuracy of the Delphi method. Thus, the tool was compiled after the Delphi technique was grouped the valid items into process, outcome and structure indicators.

**Figure 1**  
*Diagram of the RAND Delphi Method*



## RESULTS

To met trial of quality indicators, we preferred 2 round Modified Delphi Method between January until April 2019. In round 1, 20 of the 21 experts participated. Thirteen of them were hospital employees (nurses, midwifery, hospital administration, social worker), two of

them a lecturer, two as architecture, and four of them were patients. In round 2 the same group of experts were involved, 18 of the 20 experts were participated. The median age was 42 years (range 24-60)

**Table 1**

*Characteristics of the participants in the Delphi round one (1), and the Delphi round two (2)*

No	Characteristic	Category	Delphi I	Delphi II
			N 20 F (%)	N 18 F (%)
1	Sex	Male	6 (30)	6 (33.33)
		Female	14 (70)	12 (66.66)
2	Age	< 30	1 (5)	0
		31-40	3 (15)	2 (11.11)
		41-50	11 (55)	11 (61.66)
		51-60	5 (25)	5 (27.77)
3	Educational attainment	D 3	7(35)	7 (38.88)
		S1	8(40)	6 (33.33)
		S2	4(20)	4 (44.44)
		S3	1(5)	1 (5.55)
4	Professional	Nurse	5 (25)	4 (22.22)
		Midwifery	1 (5)	1 (5.55)
		Priest	1 (5)	1 (5.55)
		Hospital staff	3 (15)	2 (11.11)
		Public Relations	2 (10)	2 (11.11)
		Social worker	2 (10)	2 (11.11)
		Lecturer	2 (10)	2 (11.11)
		Architecture	2 (10)	2 (11.11)
		Private employees	2 (10)	2 (11.11)
		Entrepreneur	1 (5)	1 (5.55)
<b>Total</b>			<b>100 (100)</b>	<b>100 (100)</b>



**Table 2**

*Number of indicators rated as face-valid per domain modified RAND Delphi round I and round II*

No	Domain	N	Round I		N	Round II		Final Face Valid	Note
			Face valid	invalid		Face valid	invalid		
1	Understanding of Healing Garden Therapy program	6	4	2	2	2	0	6	
2	Events of the Healing Garden Therapy Program at the hospital	5	4	1	1	1	0	5	
3	Facilitator to conduct of Healing Garden Therapy Program	4	1	3	3	3	0	4	
4	Patients who are considered can participate	6	4	2	1	1	0	5	2 item was combined
5	The necessary facilities	4	0	4	3	3	0	3	2 item was combined be 1
6	The benefits of following Healing Garden Therapy for the patients	7	3	4	3	3	0	7	1 item was deleted
7	The benefits of following Healing Garden Therapy for the family and visitors	5	5	0	0	-	-	5	
8	The benefits of following Healing Garden Therapy for the hospital staff	6	7	0	0	-	-	7	
9	Important things to consider in Healing Garden Therapy Program	7	4	3	5	5	0	7	2 items were added (Patient safety & cross infection)
10	The Challenge for hospital staff to developing	4	3	1	1	1	0	4	
11	The challenge for the hospital management	4	0	4	4	4	0	4	
12	The garden design	7	3	4	4	4	0	7	
		65	38	27	27	26	0	64	

The above table shows that there were 65 potential indicators

from study literature and interview in the previous study (publish in elsewhere). In round I Delphi Method, there were 38 indicators were face valid, 27 items revised based on the experts recommendation. Researcher revised the 27 items indicator with note: one (1) item ( domain The benefits for patients) was deleted, two (2) items in domain Patients who are considered can participate at the HGTP and two (2) items in domain The necessary facilities needed were combine be one for each domain. Then, in domain Important things to consider in Healing Garden Therapy were added the two (2) items, namely patient safety and attention with cross infection during Healing Garden Therapy Program (HGTP) in hospital. So, that there were 26 indicators ready to be rated in Delphi method round II.

In round II, the 26 indicators from twelve (12) domains were face valid without recommendation from the experts. Finally, the 64 indicators have been valid through the first and second round Delphi method.

#### *Understanding of Healing Garden Therapy program*

Four of 6 indicators related to the understanding of HGTP in hospitals are considered in accordance with the understanding of experts (median 8-9). Understanding related to HGPT are: HGTP is an effort healing for psychological, social, and spiritual aspect, Patients are invited to the garden to reduce boredom in their room, the garden hospital present & contribution to the healing process, A comfortable environment affect the physical and spiritual healing, and the activity is a holistic nursing effort.

#### *Events of the Healing Garden Therapy Program at the hospital*

Four of 5 indicators related to the event in HGTP at the hospital were all approved by experts (median 8-9). They expect that even in the HGTP are: Start with an introduction between patients and facilitators, Entertain with the form of music, dance and games, education related health issues, Relaxation can be either mild gymnastic activity by physiotherapist, and testimonial is important thing to asking the patient's and family feelings.

*Facilitator to conduct of Healing Garden Therapy Program*

Four of 6 indicator of facilitator of HGTP were agreed by experts (median 8-8.5). To conduct the HGTP in hospital: Need a special team ( with appointed and given a letter of assignment by the Director)to organize the program implementation, better involves the various professional in hospital, Nurses should be screening and preparing the patients who will follow the HGTP, and the team needs a support from hospital management.

*Patients who are considered can participate*

Five of 6 indicator were appropriate (median7-8.5). Patient who can include the HGTP are: in stable condition, the classification of minor ailments and no emergency, patients undergoing treatment and out patients, and patients who are willing to follow the HGTP after getting orientation.

*The necessary of facilities*

Three indicators appropriate (median 8-9) and needed to revised the structure of language. To implementation the GHTP needed: A sound system, game tools and chairs to sitting for the patients, family and visitors, also need the leaflet and banner that contains information associated with the HGTP.

*The benefits for the patients*

All of 7 indicators were appropriate (median 8.5-9) three of the indicators need to revised the structure of language. The Experts agreed that benefit of HGTP for the patients are: perceived as a healing therapy for the patients, patients feel more comfortable and have the spirit, get a new insight related of health, reduce boredom while staying in hospital, patients found to have a new friends/family. Other on that, patients feel joyful, more agreed that benefit of more “humanized’

*The benefits for the family & visitor*

Seven indicators were appropriate (median 8.5-9). The benefit of HGTP for the family and visitors are: ease stress while accompanying patients, give new motivation, get new insight about the health, change the negative image of an existing hospital into a positive change, and Improve the social relationship among patients and other families in the hospital.

*The benefits for the hospital staff*

All the indicators were appropriate (median 8-9). The experts agreed that the benefits for the hospital staff area: strengthen friendship and fraternity between hospital staff, encouragement and improved performance, as a meant of self actualization, become closer to patients and family, reduce fatigue and burnout at work, provide a new insight into and out of existing routine, and the hospital staff felt proud to be able to help in the healing of patients.

*Important things to consider implementation*

Four of seven indicators were appropriate (median (8-9), and another indicators were revision with added 2 indicator, there were consider to patient safety during implementation and anticipated the cross infection. Important things to consider the HGTP implementation are: needed to socialized with to all employees and existing health profession in the hospital, the event created dynamism and do not monotonous, consider the time was needed, the event of arrange joyous, need prepare snack and beverage for the patients according to their diet, and the nurses should be accompanying patients during the HGTP implementation.

*The Challenge for hospital staff*

Three of 4 the challenges for hospital staff were appropriate (median 8). There are: the event can presenting interestingly, how to able to harmonized of the different background and culture of the participants, how to able to collaborate with outside parties to

organizing the HGTP, and how to be able to make the patients smile and not disappointed during the HGTP implementation.

### *The Challenge for hospital management*

All the indicators of challenges for management to developing the HGTP were appropriate (median 8).

There are: how to make the HGTP as the differentiating and superior service for other hospital, how to optimize the garden for the users, how to inform to the public about the benefit of healing garden, and how to make the HGTP as a positive promotion media for the hospital.

### *The garden design*

Four of the indicators of the healing garden design were appropriate (median 8-8.5), and another indicators were revised based on the expert recommendation. The indicator of the garden design are: the place (ground) that can hold for many patients, a place that is flat and safe for the patients and families, the garden should be far away from the pollution and noise, the garden is clean, accessible and provides privacy for the patients, families visitors, and hospital staff, the garden can accommodate social relationship, and the garden must have variety of elements: visibility, accessibility, familiarity, quiet, privacy, and make comfortable.

## **DISCUSSION**

Based on the results of the literature review and in-depth interviews with experts (published in elsewhere), we validated 65 indicators for the development of HGTP in hospitals. The validated used Modified RAND Delphi method in two rounds. The 65 indicators were covered into 12 domains. In the round I the 38 indicators were valid without recommendation from the experts, then there were 27 indicators needed revised based on the experts recommendation. In the round II the 26 indicators were valid without recommendation.

If it is understood from the median value, there were 65 indicators, almost all of them (98,47%) are in accordance with the categorical median

8.39. Only 1 indicator has value in uncertainly category (median 6.5).

Finally, the 64 indicators were validated. This is a consensus by experts that there is available 64 indicators from the 12 domain to develop the Healing Garden Therapy in hospital. The quality indicators were divided into 25 of structure indicators, 15 of process indicators, and 24 of outcome indicators (Donabedian,1998). Process “denotes what is actually done in giving and receiving care. It includes the patient’s activities in seeking care and carrying it out as well as the practitioner’s activities in making a diagnosis and recommending or implementing treatment” (Donabedian, 1998). Outcome according to Donabedian (1998) denotes the effect of care on the health population. Improvement in the patient knowledge and salutary change in the patients behavior are included as part of the outcome under a broad definition of health status, and so is the degree of the patient’s satisfaction with care. Furthermore, Donabedian, (1998) indicate that structure denotes the attribute of the settings in which care occurs. This includes the attributes of material resources (such as facilities, equipment, and money), of human resources (such as the number and qualifications of personnel), and of organizational structure (such as medical staff organization, methods of peer review, and method of reimbursement).

### *Strength and Limitation*

Based on the results of the literature review study, the results of this study, and other studies increasingly known that the healing garden therapy program in hospitals has many benefits both for patients, families, and also hospital staff to reduce the boredom. HGTP can help the healing process not only the physical, but also psychological, social and spiritual. This study provide contribution to evidence related to Healing Garden Therapy Program (HGTP) in Indonesia. These quality indicators can be used by Indonesian hospital to develop the Healing Garden Therapy Program as a new service to improve the quality service and patient satisfaction.

The HGTP is one way to make the holistic effort for the patients. In Indonesia (Hastuti, 2017) found that Healing Garden Therapy as A

holistic nursing. Creating healing environment is often mentioned as one goal of nursing. However, there is no formal professional consensus on what constitutes the healing environment. No research has been found specifically to develop the Healing Garden Therapy Program for patients in hospital. Amount of indicators are still enough many and hasn't recruited various types of hospitals and not yet in pilot project.

### **CONCLUSION AND RECOMMENDATIONS**

We developed 64 quality indicators of Healing Garden Therapy Program in hospitals, that can be used to measure the quality of HGTP in the hospitals. We suggest it to be testing / piloting in many different kind of hospitals.

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