

The Effectiveness of Elderly School Integration in Bina Keluarga Lansia Group (ESI-BKL) to Achieve Seven Dimensions of Robust Elderly

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ABSTRACT— The number of the elderly population in Yogyakarta Province, Indonesia, is higher compare to other cities in Indonesia. Therefore, supports from various sectors are required, including supports from the government, private sector, and community to improve the quality of life among elderly. An Elderly School Integration in Bina Keluarga Lansia (ESI-BKL) is one of the innovative interventions that have a strategic role in achieving seven dimensions of robust elderly. Respondents in this study are pre-elderly and elderly who are involved in ESI-BKL program for one year. The study design was a quasi-experimental study without control group design. The sampling technique in this study was purposive sampling. Statistical analysis performed in this study was the Wilcoxon Signed-rank test. The results of the study show there are significant differences in the intellectual, social, spiritual, environmental, vocational, and emotional dimensions before and after following ESI-BKL (p -value < 0.05). Moreover, there are no differences in the physical dimension before and after following the ESI-BKL (p -value=0.377). However, the robustness of the elderly can be measured through the indicators of 7-dimension of robust elderly. The measurement results show very significant differences in 5 dimensions, namely intellectual, social, spiritual, environmental, and emotional dimensions. In contrast, there are no significant differences in Physical and Vocational Dimensions.

KEYWORDS: Elderly School; Bina Keluarga Lansia; Seven Dimensions; Robust Elderly.

1. INTRODUCTION

The percentage of the elderly population globally in 2019 was 9.1%. The number of elderly is predicted up to 11.7% in 2030, and 15.9% in 2050. All countries ensure the well-being of the elderly by protecting human and economic rights, access to health services, life-long learning, and the provision of supports both formal and informal following SDGs [1]. The percentage of the elderly population in Indonesia in 2019 reached 9.6% or about 25.64 million people. The elderly population in Indonesia is going toward the ageing population, should the number reaches more than 10%. The Province in Indonesia with the largest percentage of elderly is in Yogyakarta Special Region, which has reached 14.5% [2]. The data from WHO regarding the 2020-2030 Plan of Healthy Ageing, there are four goals to support the well-being and health of the elderly in various countries. Those four goals including the collaboration with various sectors to support the elderly programs, supporting and developing elderly-friendly cities and communities, integrating various social and health services in the community that focuses on elderly, and providing the access for long-term care on elderly who experience limitations [3]. The government and the community should be encouraged to implement developments in their respective areas by referring to the national development program. Rural people become the main actors in the development program. Therefore, the

development process should prioritize the principles from, by, and for the community. Thus, to be able to facilitate community participation, a platform is required to help the government in managing and implementing programs and activities within the community. According to Law No.13/1998 of RI regarding the well-being of elderly, the right to improve social well-being is granted as the form of honour and reward for the elderly, including educational and training services [4]. The National Population and Family Planning Board formed Bina Keluarga Lansia (BKL) program as the platform of community groups consisting of elderly families that aims to improve knowledge, attitude, behavior, and skill of elderly families to enhance the elderly life quality. The targets of such activities are elderly and elderly families. The implemented main activities include counselling, home visit, assistance, record keeping, and reporting. In contrast, the development activities of BKL are activities related to 7 dimensions of robust elderly [5]. In the development of elderly programs within the community, cooperation with people and universities is required to study the framework compatible with the cultural condition of the community [6]. In this study, the government through the representative of BKKBN of Yogyakarta Special Region conducted the partnership with a Non-Governmental Organization (NGO), namely Yayasan Indonesia Ramah Lansia (Indonesian Elderly-Friendly Foundation) through an elderly school program. Informal educations such as education in family, community, is one of the efforts to shape a better personality. Elderly school is an informal education that does not only learn about physical health aspects, but the correlation between elements of the physical health itself, namely social, psychological, economic, environmental, and spiritual aspects also exist within this school [7].

Elderly who involve in elderly school program experienced an improvement in their quality of life. This condition is also affected by health, sleep pattern, and depression statuses [8]. Besides improving the life quality, elderly who involve in elderly school program might be able to improve confidence and life satisfaction [9]. Due to the COVID-19 pandemic, the family participation in the activities of Bina Keluarga Lansia (BKL) in Yogyakarta Special Region decreased to 40-50% in April 2020, which before reached 70-80% [10]. In the lifelong learning of this pandemic era, we have to create a new era in the learning process, to be able of developing potentials and contributions in the community; therefore, elderly will feel contended [11]. This elderly school is expected to be capable of improving family resilience, especially in the sector of BKL program. One of the learning in elderly school is the role of the elderly, specifically the elderly, who still potential in their family and community. The purpose of elderly school in Bina Keluarga Lansia (ESI-BKL) is embodying seven dimensions of robust elderly, including spiritual, physical, vocational, social, environmental, hobby, and intellectual dimensions. This program is consistent with the Guideline about the implementation of seven dimensions of robust elderly in BKL, by BKKBN in 2014, which is referring to the 2013 International Council of Active Ageing [12].

2. MATERIAL AND METHODS

The study design was a quasi-experimental study without control group design. The respondents in this study amounted to 42 elderly and elderly family who participated in ESI-BKL program for 12 meetings in BKL Dayakan, Kulon Progo, Yogyakarta, Indonesia. The implementation of ESI-BKL was performed for 120 minutes by using the online system due to the COVID-19 pandemic. Purposive sampling was used in this study. The researcher committed the success measurement of respondents in implementing seven dimensions of robust elderly before and after following the materials of ESI-BKL programs according to the ESI-BKL curriculum. The assessment of seven dimensions of robust elderly included physical, intellectual, social, spiritual, environmental, vocational, and emotional dimensions.

The curriculum of ESI-BKL is shown in Table 1 as follows.

Table 1. ESI-BKL's Curriculum

Meetings	Materials
1	Elderly problems
2	Cognitive disorders on elderly (Dementia)
3	Hypertension Management on elderly
4	Diabetes mellitus management on elderly
5	Elderly psychological disorders management(stress, anxiety, and depression)
6	First aid on emergency situations
7	Doing hobbies and skills
8	Nutrition on elderly
9	Elderly roles in preventing stunting
10	Elderly spiritual
11	7 Dimensions of robust elderly
12	The implementation of family functions

The method used in this teaching process is more practice (demonstration) than theory. This method is suitable to be applied in the research location because the levels of knowledge and education of the community are still lacking. The research analysis used by the researcher for the bivariate test was a Wilcoxon signed-rank test because the distribution was not normal.

3. RESULT

The results of the study can be seen in the table shown below:

Table 2. The implementation of seven dimensions of robust elderly before and after following ESI-BKL

Categories	Mean	Median	Minimum	Maximum	Std. Deviation	Std. Error Mean	Normality Test *)
Pre-test							
Physical Dimension	14.95	15	12	18	1.652	0.255	0.061
Intellectual Dimension	10.12	10	7	14	1.310	0.202	0.024
Social Dimension	8.57	8	7	13	1.810	0.279	0.000
Spiritual Dimension	6.48	6.37	5	11	1.065	0.164	0.000
Environmental Dimension	8.60	8	7	13	1.624	0.251	0.000
Vocational Dimension	11.29	12	7	14	1.757	0.271	0.019
Emotional Dimension	9.36	10	7	11	1.246	0.192	0.001
Post-test							
Physical Dimension	14.62	14	12	19	1.545	0.238	0.014
Intellectual Dimension	11.67	12	9	14	1.300	0.201	0.021
Social Dimension	13.64	14	7	14	1.265	0.195	0.000
Spiritual Dimension	11.86	12	9	12	0.521	0.080	0.000
Environmental Dimension	13.26	14	8	14	1.149	0.177	0.000
Vocational Dimension	10.10	10	7	13	2.022	0.312	0.003
Emotional Dimension	12	12	10	14	1.148	0.177	0.002
Information: *) Shapiro Wilk Test							

Table 2 shows that there are increasing in scores of intellectual dimension, social dimension, spiritual

dimension, environmental dimension, and emotional dimension. In contrast, the scores of vocational dimension and physical dimension are decreasing.

Table 3. The significance test on the disparities of scores of 7 dimensions of robust elderly before and after the implementation of ESI-BKL

Robust Elderly Dimensions	Mean Difference		95% CI		p-value 2 tailed **)
	Mean	Std. Error	Lower	Upper	
Physical Dimension	0.333	0.333	-0.340	1.007	0.377
Intellectual Dimension	-1,548	0.281	-2.116	-0.979	0.000
Social Dimension	-5.071	0.328	-5.733	-4.410	0.000
Spiritual Dimension	-5.381	0.190	-5.764	-4.998	0.000
Environmental Dimension	-4.667	0.347	-5.367	-3.966	0.000
Vocational Dimension	1.190	0.507	0.167	2.214	0.038
Emotional Dimension	-2.643	0.287	-3.222	-2.064	0.000

Information: **) *Wilcoxon Signed-Rank Test*

Table 4 shows that the highest increase of mean score is on spiritual dimension, which shows 5.381 of increase before and after following the ESI-BKL. However, there is a decrease of mean score after following ESI-BKL on physical and vocational dimensions. Based on the results of the statistic test by using the Wilcoxon signed- rank test, it has been acquired that there's no significant relationship on the implementation of physical dimension before and after following the ESI-BKL (p-value = 0,377). However, there are significant relationships on the implementation of intellectual, social, spiritual, environmental, vocational, and emotional dimensions before and after following ESI-BKL (p value <0 ,05).

Table 4. The satisfaction of respondents in following ESI-BKL

No	Statements	Mean	Percentages
1	Information is clear and understandable by the elderly	4.19	83.81
2	Teachers are fast and responsive	4.07	81.43
3	Teachers are polite and friendly	4.36	87.14
4	Room is comfortable	4	80
5	Broad knowledge and skills of the teachers	4.14	82.86
6	The taught materials are according to elderly problems	4.05	80.95
7	The taught materials are beneficial for self and others	4.29	85.71
8	Happy and passionate in following elderly school	4.29	85.71
9	More practices than theories on the taught materials	3.98	79.52
10	The taught materials can be practiced at home	4.05	80.95

According to the evaluation data by using the instrument of participant satisfaction in following ESI-BKL, most of the respondents stated that teachers are polite and friendly in giving education to the participants (87,14 %).

4. DISCUSSION

4.1 The implementation of seven dimensions of robust elderly before and after following ESI-BKL

According to Table 2, the whole implementation of seven dimensions of robust elderly experienced increases except for physical and vocational dimensions. The learning of physical dimension includes exercises to overcome the health issues of the elderly. Some respondents were having difficulties in implementing the materials related to physical practices, such as the practice for emergency aid because the

learning was performed online without being assisted by family. Respondents were having visual and perception decreases, and therefore, when they were sent the materials through video online, the elderly felt incapable of using the existing facility [13]. Besides physical dimension, vocational dimension also decreased. Vocational dimension included training of respondents to increase respondents' income. In this method, only one material or meeting was given regarding vocational dimension. Elderly should be provided with in-depth materials and direct practices regarding vocational or occupational dimension. The administration of occupational therapy might increase functional skill, social participation, and the quality of life of the elderly [14]. The teaching processes in ESI- BKL implemented more daily work or activities of the respondents. Most of the respondents have activities in their garden or goat farms in their houses. Teachers also taught about gardening therapy and the management of cattle waste to be made as fertilizers. Besides gaining incomes, this could also improve the life quality of the elderly. According to the previous study, elderly who performed animal therapy (goat therapy) can increase their moods, so their life qualities were increased [15]. Spiritual dimension is the highest dimension that experienced increased after the participation in ESI-BKL. The spiritual/religious intervention might improve spiritual well-being and decrease anxiety on the elderly [16]. Elderly with high spiritual well-being experienced better mental health compared to the elderly who have low spiritual well-being [17].

4.2 The significance test on the differences of scores of seven dimensions of robust elderly before and after the implementation of ESI-BKL

The presence of education in the form of elderly school might increase the comprehension of the elderly to be better. According to the result of the previous study, collective efforts are required to improve the knowledge of the elderly in the community through the education process and health care through the process of community empowerment [18]. Health Belief Model (HBM) was the used model. This model is effective to increase the knowledge of elderly and improving the independence of elderly to be capable of practising taking care of themselves [19], [20]. Participated in elderly school (lifelong education) affect the elderly on their life satisfaction and self-reception toward the occurring changes [21]. The ESI-BKL activity is also one of the health counselling activities regarding seven dimensions of robust elderly. The health education activity in the ESI-BKL conducted by disseminating messages and implementing confidences. Health counselling is aimed to change the less- healthy behaviors into healthy behaviors. Robust elderly is someone or some elderly who capable of adapting to the ageing process positively, so they achieve quality old time in a comfortable environment. The elderly stays healthy (physical, social, and mentally), active, productive, and independent during their life cycles. The robustness of the elderly can be measured through the indicators of 7 dimensions of robust elderly. The measurement results showed significant differences in four dimensions, namely intellectual, social, spiritual, environmental, and emotional dimensions. While for the physical and vocational dimensions, there were no significant differences.

4.3 The elderly satisfaction in following ESI-BKL

The elderly school integrated into this BKL is one of the efforts of non-formal education, which aimed more towards BKL members to improve knowledge, attitude, and behavior to live more independently. Non- formal education, such as Elderly School in this BKL is every activity conducted in organized and systematic manners, done independently to serve certain learning participants to achieve the learning purpose. The learning goal of this ESI-BKL is to improve self-ability, so the seven dimensions of robust and useful elderly can be achieved. In the management of this non-formal education, management efforts or proper management supports are required so the purpose can be accomplished. Teacher support, curriculum, classroom, facilities and infrastructures are some required aspects. The teaching and learning process is a process of interpreting and transforming values in the curriculum to the students, through teaching and learning interactions at schools [22]. In this context, the teaching and learning process in the

scope of elderly school is technically the active interactions between educators and elderly as the learning participant. Teaching and learning process is an educational process between teachers and students based upon the reciprocal relationship that occurs in educative situations to achieve specific purposes. The interaction or reciprocal relationship between teachers and students is the primary condition for the course of the teaching and learning process. The interaction in the event of teaching and learning has a broader meaning, not only regarding the relationship between teachers and students but in the form of educative interactions. In this case, the delivery of messages in the form of learning materials to understand seven robust dimensions is not the only thing, but also requires the embedding of attitude and value on learning participants who are currently learning. The measurement results of the satisfactory learning level showed that most of the learning participants have “satisfied” as their level of satisfaction. The satisfaction toward the learning process in elderly school become a unique capital in the process of absorbing the learning given by the educators. Some aspects caused the increase in learning participants’ satisfaction, including the presentation of the teachers, ways and methods used by teachers. Teachers used the technique that is easy to understand and easy to be applied to learning participants. Materials and method are adjusted to the condition of education and knowledge levels as well as the culture of learning participants. The learning method provided to the participants of elderly school is practice and demonstration that can be easily applied at home independently through the family assistance. Health education is an important aspect to promote health on the elderly. Family participation is required to be able to give this education because they have plenty of time; they can meet with the elderly, and teach them directly [23]. The policy of the elderly program in the community has to consider the culture and social life within the community [24]. The evaluation process of ESI-BKL was performed by measuring the knowledge, attitude, or action of the respondents before and after following the activities. Besides, the researcher also measured the satisfaction level of the elderly who participated in ESI-BKL. The evaluation process used quantitative and qualitative assessment techniques. A qualitative approach was used by conducting observations and interviews toward respondents that included the hopes and satisfaction of elderly in following the activities. This can provide broader information compared to the quantitative method [25]. The evaluation method of health promotions in the community can be done by measuring the results of pre-test and post-test [26].

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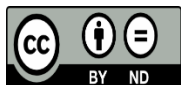
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