The Effect of Training Stunting Prevention on the Work Motivation of Health Cadres Caring about Stunting in Karangroto Village, Semarang City, Central Java, Indonesia

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Abstract

Introduction: Indonesia is ranked 5th in the world with a stunting prevalence of 37%. One of the prevention efforts can be through the active role of the community including posyandu health cadres who are equipped with training on stunting, so as to form an adequate work motivation of posyandu health cadres. This study aimed to identify the effect of training on stunting prevention on the work motivation of stunting health care workers in Karangroto District.

Method: This research was a true experimental design in the Semarang District Area, Province of Central Java, Indonesia. The number of samples 32 respondents with a total sampling method. It included 32 health cadres at the Manggis and Durian Posyandu who have registered in the Anti-Stunting Healthy Home service. Data were collected with questionnaire. Analyzed data used wilcoxon test and Mann whitney test

Results: This study found that Characteristics of respondents mostly at the high school level of education (40.6%), not working (96.9%), the average age of 47.16 years, and the average length of time for cadres had 11.44 years of work. Mann Whitene test results showed a p value of 0.000.

Conclusion: There was an influence between training on stunting prevention on the work motivation of health care cadres caring for stunting in Posyandu Manggis and Durian Kelurahan Karangroto.

Recommendations: This research was expected to increase the work motivation of health cadres to monitor stunting in their area.

Keywords: Training, Stunting, Health Work Motivation

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INTRODUCTION

Stunting occurs in circumstances where the child has a growth disorder due to a condition of chronic malnutrition or in a few cases due to a chronic infectious disease, this condition results in the child's visual being stunted or not growing properly¹.

Based on the world ranking of stunting in under five year old children, Indonesia ranks 5th with a stunting prevalence of 37%. According to the Global Hunger Index in 2018, Indonesia is in the range of serious problems with world stunting⁴. According to the Basic Health Research (Riskesdas) data in 2018, the prevalence of stunting in Indonesia in 2018 reached 30.8% which means it decreased in 2010 which was 37.2%.² Although the stunting trend
has declined, this percentage is still below the recommendation of the World Health Organization (WHO). The percentage of stunting in Indonesia is still in the high category and must receive special attention from the government and health promoters to get the desired target by 2025\(^3\).

Besides in the form of therapy, treatment, or improvement of health services, efforts in overcoming health problems are also focused on efforts to minimize risk and active community involvement, for example the presence of health cadres\(^6\). Judging from the principle of community empowerment, the learning process is very necessary and an important concern, this learning process can be in the form of training conducted at the beginning with the subject of training on a health problem that is occupied by health cadres\(^2\).

**METHODS**

**Study setting and design**

This research was a true experimental design study with a pre-post test with control group research design and using quantitative data analysis. In this study, the true type of experimental design used in the control group was the pre test and post test control group design. The research was conducted at the Anti Stunting Healthy Home (RS-AS) which is located in the mini hospital building of the Faculty of Nursing UNISSULA, Semarang District, Province Central Java, Indonesia, over a period of five months from July - November 2019.

**Study Population**

Respondents in this study were all health cadres who care about stunting fostered by Rumah Sehat Anti Stunting (Mini Hospital), amounting to 32 health cadres. 16 health cadres from Posyandu Manggis and Posyandu Durian Karangroto Semarang as the intervention group and for the control group respondents numbered 16 respondents from the Belimbing Posyandu and Semangka Karangroto Posyandu Semarang.

**The Sampling Technique**

The sampling technique in this study used total sampling. The all of sample were amounting to 32 health cadres 16 health cadres from Posyandu Manggis and Posyandu Durian Karangroto Semarang as the intervention group and for the control group respondents numbered 16 respondents from the Belimbing Posyandu and Semangka Karangroto Posyandu Semarang. We invited respondents and confirmed the informed consent to become participants for this study. The location for sampling was in the Anti Stunting Healthy Home (RS-AS), in the mini hospital building of the Faculty of Nursing UNISSULA, Semarang District, Province Central Java, Indonesia.

**Measurements**

The research instrument used in this study was a questionnaire. Questionnaire A to explores the demographic data of respondents consisting of initials name, address, gender, marital status, age, length of time as a cadre and last education. Questionnaire used B to measure the implementation of training interventions. Questionnaire C is a questionnaire to measure the work motivation of health cadres. Winbaktianur & Putri (2017) The Work motivation questionare contains 24 statements using a Likert scale with answer choices and assignments in the form of SS (Strongly Agree) = 5, S (Agree) = 4, KS (Less Agree) = 3, TS (Disagree) = 2, STS (Very Disagree) = 1, then the maximum value that may be obtained is 120, and the minimum value is 24. The work motivation questionnaire of health cadres has been tested for validity and reliability with results of 0.515 - 0.861.

**Statistical Analysis**

Univariate analysis was conducted to distribute the characteristics of respondents and dependent variables. The data was displayed in the form of a frequency distribution table. The bivariate analysis in this study used the Wilcoxon Test and the University of Mann Whitney U. The Wilcoxon test in this study was conducted to compare the pre-test
and post-test data in each group, both the experimental group and the control group. In this study, the Mann Whiteneey test was used to compare the post test data between the experimental group and the control group because the data distribution is not normal after the normality test is carried out.

**Ethical considerations**

Consent was obtained from all health cadres after an explanation of the study objectives was provided and anonymity of the results was assured. Approval for the study was obtained from Nursing Research Ethics Committee of the Faculty of Nursing, Universitas Islam Sultan Agung, Semarang, Indonesia.

**RESULTS**

**Univariate Analysis**

The level of education and work of the respondent in this study, most respondents had a high school education level of 13 respondents (40.6%) and did not work as many as 31 respondents (96.9%). The average age of the respondents in this study was 47.16 years (standard deviation ± 8.29). The youngest age range was 34 years and the oldest was 64 years. The average length of time for the respondents to become a cadre was 11.44 years (standard deviation ± 8.64). The shortest span to become a cadre is 1 year and the longest is 38 years.

**Bivariate Analysis**

The result of the post-test mean score of the experimental group was 103.06 higher than the pre-test result which was only 89.94. Then the difference in the increase in the post-test score against the pre-test of the experimental group was 13.12. The post-test average score of the control group was 86.19 lower than the pre-test score of 93.75. Then the difference means in the post-test score against the pre-test in the experimental group decreased by 7.56.

The result of four confounding variables studied, only the education variable towards the pretest is related because it has a p value 0.013 (p <0.05). The intervention group where the respondents were 16 posyandu cadres who care about stunting, the p value is 0.001. Because the value of 0.001 is smaller than 0.05, it can be concluded that there is an influence from the existence of stunting prevention training on the work motivation of cadres to care about stunting from pretest to posttest in the intervention group.

In the control group was group that did not receive training, the respondents were 16 posyandu cadres, obtained a p value of 0.047. Because the value of 0.047 is smaller than 0.05, it can be concluded that there is an effect of work motivation for the pretest and posttest in the control group even though there is no training. However, this influence is negative or has decreased the motivation value from pretest to posttest.

The post-test scores that were carried out in the intervention group and also the control group, which in total had 32 respondents, the p value was 0.000. Because the value of 0.000 is less than 0.05, it can be concluded that there is a difference between the post-test scores of the intervention group and the post-test scores of the control group.

**DISCUSSION**

On the characteristics of the level of education, the results of statistical analysis show the p value of the level of education with a pre-test of 0.013 and a post-test of 0.101. Through these results, it can be concluded that in this study education affected the motivation of health cadres before the training intervention was carried out, but education did not affect the motivation of the health cadres after the training intervention. So the intervention model given can be applied to all groups of education level.
From this description, the researcher can conclude that the level of work motivation of cadres caring about stunting cannot be separated from the knowledge of the cadre mothers themselves. The knowledge of this cadre mother is not only obtained through formal education but also non-formal education.

As for the job characteristics, get the results of statistical analysis of the p value of the job with a pre-test of 0.362 and a post-test of 0.146. Through the results of this analysis, it can be concluded that in this study the status of cadre work does not affect the work motivation of cadres caring about stunting. So that the interventions provided to increase work motivation for posyandu cadres are equally effective in all work groups.

The status of the work of the cadre mothers in the Karangroto Posyandu region is also related to the day of the implementation of the Posyandu for toddlers held on weekdays, so most cadre mothers who follow it are mothers who do not have the responsibility to work on working days.

In terms of age characteristics, most respondents were in the age range of more than 50 years. The results of this study are in line with the theory that age influences one's comprehension and mindset. The older a person is, the wiser, the more information and experience he has gained, and the more he has the awareness to continue to maintain his socializing relationship with the community.

However, this is not in line with the results of a study that showed on the effect of balanced nutrition training on improving the knowledge and skills of elderly posyandu cadres in Grogol Petamburan District, West Jakarta, which stated that the cadre mothers who were the respondents most were less than 50 years old (53.1%), the rest are more than 50 years old.

Based on the old characteristics of cadres, most respondents are in the range of less than 5 years of work. The same thing was also found in a study that regarding the effect of balanced nutrition training on improving the knowledge and skills of elderly Posyandu cadres in Grogol Petamburan District, West Jakarta, which stated that the most work periods of becoming a cadre mother were in the range of ≤ 5 years, namely as many as 18 respondents (56%).

But this is not in line with the opinion that experience is the best teacher. This saying can be interpreted that experience can present a source of knowledge. The conclusion cannot be generalized to all cadre mothers where the longer the respondent becomes a cadre, the more experience will be gained so that it will have an indirect impact on work motivation as a posyandu cadre.

In this study, the results of statistical analysis showed that the p value of age with a pre-test of 0.161 and a post-test of 0.109. And the old p value becomes a cadre with pre-test of 0.983 and post-test of 0.059. Through the results of this analysis, it can be concluded that in this study the age of cadres and the length of time a cadre did not affect the work motivation of cadres caring about stunting. So that the interventions provided to increase work motivation for posyandu cadres are equally effective in all age groups and old cadres, both those who have recently become cadres and those who have long been cadres.

From the description of the results above, the author can conclude that in this study, there are different trends in the age of cadre mothers in Posyandu Manggis, Durian, Star Fruit and Karangroto Watermelon. In general, the average age of posyandu cadres is less than 50 years.

While the comparative analysis results from the comparison of the pre-test and post-test results in the control group that did not receive stunting prevention training interventions obtained p value of 0.047 (p value <0.1) which shows that work motivation in the Posyandu Belimbing and Posyandu Semangka cadres experienced change. In addition to the p value, the results of the study also obtained data on the average motivation score in the control group at pretest
At 93.75 and at posttest at 86.19. The average value of the post-test that is smaller than the average value of the pre-test proves that the changes that occur in this group are not increased or towards a better direction but in the form of a decrease in the level of motivation. There were 11 respondents who experienced a decrease in motivation score and 1 respondent whose work motivation was stagnant.

This study showed that work motivation reduces the risk of stunting in Posyandu cadres in the experimental group who had received some training related to stunting prevention had changed in the form of an increase in the level of motivation. This increase can be seen from the positive rank results obtained, namely 15 respondents who have increased motivation, while there is 1 respondent who has decreased work motivation.

The results of research that show that training can increase work motivation are also supported by several studies that have been conducted. In a study conducted by Gullu (2016) about the Impact of Training and Development Programs on Motivation of Employee in Banking Sector. This study shows the results of the correlation between training programs and the development of motivation to get a p value of 0.000, which means it influences. In this case, Gullu concluded that if employees were given training and development, their motivation increased as evidenced by primary data. Training and development (if provided effectively) has a positive effect on motivation.

The same results were also obtained from research about regarding The Impact of Training on Employees Motivation in SMEs Industry. The results of the study stated that 43% of employees experienced an increase in work motivation after receiving training, 43% of employees also considered this training to be very helpful in developing their skills.

The results of a study in 2012 entitled "The Effect of Training on Employee Motivation at the Riau Provincial Revenue Service" also showed positive results. The results showed a correlation coefficient of 65.9%, which means a strong influence. From this analysis it can be concluded that training has a significant effect on employee work motivation at the Riau Provincial Revenue Service.

This result is confirmed by the theory conveyed by Simamora that training and development is a way that can be done to motivate and improve work skills, including providing counseling on one's behavior and following up with the procurement of training.

But this is not in line with research conducted by Yunior on the Effect of Training on Employee Work Motivation at the Regional V Education and Social Welfare Training Center in Sulawesi in Makassar City. The results of the study indicate that training does not have a significant contribution to work motivation.

So it can be concluded that this study supports previous research and also proves the theory presented by Simamora which states training as a way to increase motivation. While in the phenomenon that occurs in the control group, the results of this study are in line with research conducted by Winbaktianur regarding the effectiveness of motivational training to increase the work motivation of outsourcing workers as cleaning services. From the results of his study showed that the experimental group experienced an increase in work motivation marked by the mean score posttest greater than pretest 134.47 (posttest value > pretest value). Whereas the control group experienced a decrease in work motivation as evidenced by the mean score of posttest smaller than pretest (posttest value < pretest value).

Based on the results of the researchers’ analysis, it can be concluded that the decrease in motivation level experienced by the control group occurred because there was no intervention in the form of stunting prevention training for respondents in the control group. Because something that is left tends to be stagnant or will experience degradation, in contrast to something given treatment will cause a response and impact.
Table 6 explains the test results that Mann Whitney got the results of comparative analysis of the comparison of the mean rank post-test results of the experimental group obtained a value of 23.38 where the value is greater than the average rating of the control group which has an average value of 9.63. This shows that there is an increase in the work motivation of the experimental group as evidenced by the difference in the mean difference in motivation scores from pretest to posttest by 13.12. Whereas the control group experienced a decrease in motivation, indicated by the negative results for the difference in the difference in the mean motivation score from pretest to posttest which was -7.56. In addition to the results of the Mann rank, the results of the significance value obtained from the testing of these two groups were p value 0.000 (p value <0.05). Through these results it can be concluded that there is a very significant difference between the results of the experimental group and the control group.

The results of this study are in line with research that regarding the effectiveness of motivational training to increase the work motivation of outsorcing workers as cleaning services. From the results of his research indicate that there are significant differences between the work motivation of the experimental group that is given treatment in the form of motivation training with the control group that is not given motivation training. Based on the results of the man whitney test between the experimental group and the control group shows that overall there are differences in the level of significance.

The same results were also obtained in a study that regarding training to improve the knowledge and skills of Puskesmas cadres in implementing the standard of monitoring infant growth in Belitung City, which in their research conducted three post-tests, post-test scores that obtained by the experimental group is always greater than the control group.

From the researcher's analysis, it can be concluded that the role of training here is very significant in increasing the work motivation of health cadres who care about stunting who get it. This is in accordance with the theory of factors that can increase motivation including through self-development that can be obtained from training.

CONCLUSIONS

Training on stunting prevention and work motivation for posyandu health care cadres in stunting in Karangroto Village, Semarang has a significant influence as evidenced by the results of the test which obtained a p value of 0.000. Health cadres who received training experienced an increase in work motivation after being given training. In contrast to health cadres who did not receive training, their work motivation has decreased or stagnated. Increasing the work motivation of health cadres to monitor stunting in children under five in their working area will help anticipate and handle early stunting in children.

STUDY LIMITATIONS

There was no significant limitation in this research. The limitation in this study was that the coverage of respondents was not wide enough.

ACKNOWLEDGEMENTS

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http://doi.org/10.36295/ASRO.2021.24324
REFERENCES


List of Table

Univariate Analysis

Table 1. Distribution of Respondents Frequency Based on Education (n = 32) and Occupation (n: 32) in Posyandu Manggis, Durian Posyandu, Belimbing Posyandu and Karangroto Watermelon Posyandu in September-December 2019

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary School</td>
<td>6</td>
<td>18,8</td>
</tr>
<tr>
<td>Junior High School</td>
<td>10</td>
<td>31,3</td>
</tr>
<tr>
<td>Senior High School</td>
<td>13</td>
<td>40,6</td>
</tr>
<tr>
<td>Diploma</td>
<td>2</td>
<td>6,3</td>
</tr>
<tr>
<td>Bachelor</td>
<td>1</td>
<td>3,1</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>1</td>
<td>3,1</td>
</tr>
<tr>
<td>Unemployment</td>
<td>31</td>
<td>96,9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32</td>
<td>100</td>
</tr>
</tbody>
</table>

Bivariate Analysis

Table 2. Frequency Distribution of Respondents by Age (n: 32) and length of cadre (n = 32) at Manggis Posyandu, Durian Posyandu, Belimbing Posyandu and Karangroto Watermelon Posyandu in September-December 2019

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Mean±SD</th>
<th>Median</th>
<th>Min-Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (year)</td>
<td>47,16±8,29</td>
<td>47,00</td>
<td>34-64</td>
</tr>
<tr>
<td>Long to be cadre (year)</td>
<td>11,44±8,64</td>
<td>10,50</td>
<td>1-38</td>
</tr>
</tbody>
</table>

Table 3. Distribution of Respondents Frequency Based on Work Motivation Values of Health Care Cadres Stunting in Experimental groups (n: 16) in Posyandu Manggis and Posyandu Durian Karangroto in September-December 2019

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean±SD</th>
<th>DI (post-pre)</th>
<th>Median</th>
<th>Min-Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre- Eks</td>
<td>89,94±6,319</td>
<td>13,12</td>
<td>91,00</td>
<td>69-99</td>
</tr>
<tr>
<td>Post-Eks</td>
<td>103,06±6,382</td>
<td>-7,56</td>
<td>91,50</td>
<td>61-101</td>
</tr>
</tbody>
</table>

Table 4. Distribution of Respondents Frequency Based on Work Motivation Values of Health Care Cadres Stunting Control Groups (n: 16) in Belimbing Posyandu and Karangroto Watermelon Posyandu in September-December 2019

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean±SD</th>
<th>DI (post-pre)</th>
<th>Median</th>
<th>Min-Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre- Control</td>
<td>93,75±8,775</td>
<td>-7,56</td>
<td>92,00</td>
<td>70-109</td>
</tr>
<tr>
<td>Post-Control</td>
<td>86,19±12,854</td>
<td>-7,56</td>
<td>91,50</td>
<td>61-101</td>
</tr>
</tbody>
</table>
Table 5. The Relationship between Health Cadre Work Motivation and Confounding Variables

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>n</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Education</td>
<td>32</td>
<td>0.013</td>
<td>0.101</td>
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</tr>
<tr>
<td>2.</td>
<td>Employment</td>
<td>32</td>
<td>0.362</td>
<td>0.146</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Age</td>
<td>32</td>
<td>0.161</td>
<td>0.109</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Long to be cadre</td>
<td>32</td>
<td>0.983</td>
<td>0.059</td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Wilcoxon Test Results Based on Work Motivation Before and After Intervention Group Respondents Training at Manggis Posyandu and Durian Karangroto Posyandu in September-December 2019

<table>
<thead>
<tr>
<th>No</th>
<th>Experiment Group</th>
<th>n</th>
<th>Mean±SD</th>
<th>DI (post-pre)</th>
<th>95% CI</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pretest Before Intervention</td>
<td>16</td>
<td>89.94±6.319</td>
<td>13.12</td>
<td>69</td>
<td>99</td>
</tr>
<tr>
<td>2.</td>
<td>Posttest After Intervention</td>
<td>16</td>
<td>103.06±6.382</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7. Wilcoxon Test Results Based on Work Motivation Before and After Training Control Group Respondents at Posyandu Belimbing and Posyandu Semangka Karangroto in September-December 2019

<table>
<thead>
<tr>
<th>No</th>
<th>Control Group</th>
<th>n</th>
<th>Mean±SD</th>
<th>DI (post-pre)</th>
<th>95% CI</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pre-test</td>
<td>16</td>
<td>93.75±8.775</td>
<td>-7.56</td>
<td>70</td>
<td>109</td>
</tr>
<tr>
<td>2.</td>
<td>Post-test</td>
<td>16</td>
<td>86.19±12.854</td>
<td></td>
<td>61</td>
<td>101</td>
</tr>
</tbody>
</table>

Table 8. Mann-Whitney Test Results Based on Post-test Results Data for the Intervention Group and the Control Group (n = 32)

<table>
<thead>
<tr>
<th>No</th>
<th>Variabel</th>
<th>n</th>
<th>Mean±SD</th>
<th>95% CI</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Post Intervensi – Post Kontrol</td>
<td>32</td>
<td>94.63±13.158</td>
<td>61</td>
<td>111</td>
</tr>
</tbody>
</table>