Performance of the Health Cadres in Children's Growth and Development Monitoring Program after Training in the Working Area of Public Health Services of Abiansemal II, Badung, Bali

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Abstract

Screening of growth in each child's routine is a occurrence of early developmental delay in children. However, often these activities could not be implemented due to lack of health human resources. Therefore, it needs to involve the active participation of communities, especially cadres health. Generally, this research aims at monitoring the program of growth and development of children after training. This research was conducted in the Public Health of Abiansemal II. Study population was all health cadres. The research was carried out by total sampling on each selected village health centers in the region. The study design is quasi-experimental methods (quasi-experimental research) with a model of one group pretest-posttest design. Instrument data collection using questionnaires and observation sheets. The statistics are using the Wilcoxon analysis (non-parametric). The results of the study noted that there were differences in the median pre-post knowledge (75 to 90, p value ≤ 0.0 5), attitude (72.7 to 80, p value ≤ 0.0 5), and skills (78 to 91.3, p value ≤ 0.0 5). This study concludes that an increase of of knowledge, attitudes and skills of health Cadres after training. Need to do the continuous training for health cadres and fully involving them in stimulating and early detection of growth and development of children .

Keywords *: Early detection, growth, development, performance, cadre*

Introduction

The era of globalization requires quality human resources, therefore children must be prepared in order to grow and develop optimally. An important period in child development is toddlerhood, because at this time the basic growth that will influence and determine further developments such as cognitive abilities, creativity, psychosocial, emotional, and behaviors that run very fast, in this period the parents' active role is very important[1].

The development of a child is the result of the interaction of various interrelated factors, namely genetic factors, the bio-physico-psycho-social environment, and behavior. Disruption of developmental delay is a serious problem for countries in the world[2]. In 2004 it was estimated that around 23% of children in the world experienced developmental disorders. In the United States, an estimated 12-16% of children experience developmental and behavioral disorders. Communication disorders and cognition disorders are part of developmental disorders that occur in about 8% of children. The number of toddlers in Indonesia is 10% of the population, with the prevalence (on average) of developmental disorders varying from 12.8% to 16% so that it is recommended to observe / growth screen for each child[3].

Delay of development is often too late to be known so that healing takes longer. The Indonesian Ministry of Health launched the Early Growth and Development Stimulation, Detection,Intervention Program (SDIDTK) for children 0-72 months. However, in implementation

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there are still obstacles so that this program cannot run as expected[4]. Study in Semarang City found that the SDIDTK program is not correctly disseminated, the supporting facilities were still inadequate and there was a lack of support from the Head of the public health[5].

A comprehensive and coordinated of SDIDTK program for toddlers can be carried out in the form of partnerships between families (parents, child caregivers and other family members), communities (cadres, community leaders, professional organizations, non-governmental organizations, etc.), with professionals (health, education, and social)[6]. Cadres have a very important role in society because they are health care workers who are in the midst of the community[7].

Interviews with officers at the public health of Abiansemal II said that the SDIDTK program in *Posyandu* is not well implemented even though visitors reaches 80%. This is due to the limited human resources who have the ability to carry out these activities. One of the efforts that can be done is by involving the active participation of health cadres who have been trained in SDIDTK. Generally the purpose of this study is find out the differences the performance of health cadres in the toddler growth and development monitoring program after training.

Method

The research is quasi experimental research with one group pretest-post test design that is giving questionnaires before and after being given treatment[8]. The respondents were health cadres involving 50 respondents. Instrument data collection is used questionnaires and observation sheets. To ensure the consistency of the respondents' answers in the knowledge statement, the questions are arranged that are *favorable* and *unfavorable*, so that they are not always positive statements and are often the right answers[9]. Data analysis techniques include descriptive analysis, normality test data and Wilcoxon analysis.

Results

Characteristics of respondents showed the highest age in respondents was> 35 years (56%), secondary education (54%), employment as a housewife (70%), number of children 2-3 people (80%), highest income > 3 million IDR (38%).

Table 1: Respondents Characteristic

KarakteristikCharacteristics	**Responden (n=50)Respondents (n = 50)**	
	nn	**%%**
1. Umur1. Age < 20 tahun<20 years old 20-35tahun20-35 years > 35tahun> 35 years old	11 2121 2828	22.0 4242.0 5656.0
2. Pendidikan2. Education DasarBasic MenengahMiddle class TinggiHigh	1919 2727 44	3838.0 5454.0 88.0

Cont... **Table 1: Respondents Characteristic**

3. Pekerjaan3. Work Tidak bekerja/IRTNot working Wiraswastaentrepreneur SwastaPrivate PNSCivil servants	3535 99 55 11	7070.0 1818.0 1010.0 22.0
4. Jumlah anak4. Number of children 1orang1 person 2-3orang2-3 people ≥ 4orang≥ 4 people	99 4040 11	1818.0 8080.0 22.0
5. Pendapatan5. Income Kurang dari 1.800.000,-/bulanLess than IDR 1.800.000/ month IRp 1.800.001 s/d2.500.000,-/bulanIDR 1.800.001 to 2.500.000/ month IRp2.500.001 s/d3.000.000 /bulanIDR 2.500.001 to 3.000.000/ month Lebih dari Rp 3.000.000,-/bulanMore than IDR 3.000.000/month	77 1515 99 1919	1414.0 3030.0 1818.0 3838.0

Shapiro-Wilk tests shows the three variables *p value* < 0.05, then continued with *Wilcoxon Test.*

The results showed that knowledge of the respondents before and after the training was 75 vs 90, while the value range before training was 55-90 and after treatment is 72- 100 (*p value ≤ 0.001)* . The median value of attitude before and after training was 72.7 vs 80, and the value range before training was 55-85 and after training 60-98 (*p value ≤ 0.001*). The median value of skills before and after training was 78 vs 91.3, and the value range of skills before training was 55-85 and after training was 60-100 (*p value ≤ 0.001*).

Table 2 Differences in Knowledge, Attitudes and Skills of Health Cadres

Before And After Training

IndikatorIndicator		Descriptive		ZWZW	NilaipP value
		SebelumBefore	**SesudahAfter**		
Pengetahuan Knowledge	Mean (SD)Mean+SD MedianMedian ModeMode RentangRange	71,9 (11,73)71.9+11.73 7575 8080 55-9055-90	87.96 (9,6)87.96+9.6 9090 9595 72-10072-100	-6,06-6.06	0,000.00
SikapAttitude	Mean (SD)Mean+SD MedianMedian ModeMode RentangRange	72,1 (7,17)72.1+7.17 72,772.7 6565 55-8555-85	81,7 (7,3)81.7+7.3 8080 7777 60-9860-98	-6,09-6.09	0,000.00

***Cont...* Table 2 Differences in Knowledge, Attitudes and Skills of Health Cadres**

Before And After Training

Keterampilan Skills	Mean (SD)Mean+SD MedianMedian ModeMode RentangRange	76,2 (4,99)76.2+4.99 7878 7878 55-8555-85	90,5 (7,78)90,5+7.78 91,391.3 100100 72-10072-100	-6,09-6.09	0,000.00

Description: ZW = Wilcoxon Test in pairs

Discussion

The level of knowledge of respondents varied, meaning that there was a difference in knowledge that was quite far between respondents. This condition occurs because of the varied information obtained by respondents regarding stimulation and early detection of developmental growth in children. Respondents also had not received health education about SDIDTK from both health workers and health institutions.

Based on the facts, even though health counseling has never been held about SDIDTK but there were five respondents who received a knowledge score of 85 at the time of the pretest. Apparently, the respondents knew about SDIDTK from electronic media (through browsing on the internet) and by reading health articles to stimulate and detect child growth and development. The source of information is one of the factors that can affect one's knowledge to broaden their horizons so that they can improve knowledge and ability[10].

The knowledge posttest shows median value of 90 with a standard deviation of 9.6 . The training carried out by the lecture method, audio visual media, modules can arouse the attention of health cadres to listen. Thus the information submitted can be received well and clearly by the respondents. Some respondents get a low value of knowledge due to low individual motivation factors both internal motivation and external motivation. This was revealed when the respondents stated that the activities to examine infants and toddlers were solely the duties of midwives. Mubarak (2007) states that motivation is a process of linkages between business and satisfaction of certain needs. Motivation is a process for achieving a goal[11].

The respondents were 56% are over 35 years of age which are middle adulthood periods. According to Werner in Hurlock (2002), achievement in middle adulthood is a positive picture of individuals. Individuals over 40 years of age generally have sufficient experience in education and association so that they have sufficient knowledge, definite attitudes and values about social development that are well developed[12].

Based on education, 54% of respondents attended high school. The respondent's education level can influence the respondent's knowledge after training so that there are differences in the results of the *pretest* and *posttest*. This result is reinforced by the theory by Irmayanti (2007) that educational factors influence one's knowledge so that the higher a person's education is the easier they are to receive information and the more knowledge they have[13].

The level of education of a person can influence the learning process in accepting new knowledge. The higher education, the easier the person receives information so that the more knowledge he has. Knowledge is very closely related to education where it is expected that someone with higher education will have more extensive knowledge[14].

The results of the pretest attitude, respondents obtained a median value of 72.7 with a standard deviation of 7.17. This indicates that respondents still consider stimulation and early detection activities not yet important and are carried out only when there is a disruption of child growth and development. This is because their knowledge is still lacking, so that readiness

and motivation to do stimulation and early detection of growth and development is also less. The posttest shows median value of 80 with a standard deviation of 7.3 . Value of respondent's attitude range after training 60-98. This attitude improvement was caused by cadres who had gained knowledge about SDIDTK toddler in training . Attitude is not always fixed, because attitudes can develop when they get positive and impressive influences from both inside and outside. The statement is in accordance with Wawan's theory (2010 that aspects of knowledge will determine a person's actions (practices), the more positive aspects of an object are known, the more positive attitudes toward the object will be generated. This means that the better the level of one's knowledge, the better the attitude or practice[15].

Personal experience factors is one of the main parts that influence attitudes so someone will experience that has been passed. Other people also influence a person's attitude who are considered important. As in Allport's theory that a person is determined by various various factors outside of a person play a role as determinants and even modifiers of behavior[16]. Extrinsic motivation has a role when individuals do something[17].

Based on some research results it can be concluded that knowledge influences the attitude of each person, if the person's knowledge is good then that person will have a positive attitude. Knowledge is an important component to form positive attitudes and behaviors[18]. Attitudes are very closely related to the level of knowledge[19]. The results obtained with the theory which how well one's knowledge of objects will determine their attitude towards the object. The higher a person's knowledge of an object is expected to produce the right attitude (positive) on the object[20].

The results of the pretest-posttest skills obtained a median value of 78 vs 91.3. This illustrates that respondents are able to learn and practice the skills given so as to achieve the expected goals. During the training use module, audio visual and also demonstrated. In accordance with Hamalik's research (2005), which states that the use of learning media at the learning orientation stage will greatly help the effectiveness of the learning process and the delivery of messages[21]. Knowledge from the results of not knowing to know, this happens after someone does sensing a particular object and the stimulus. Most human sensing is obtained through the eyes and ears, but the more the five senses are used in learning an object, the better and more knowledgeable in learning an object[18].

The research by Rahmat (2012) in Menden Village, Central Java shows that counseling can influence and increase one's knowledge to understand something, also influence attitudes and actions in an activity[22]. The change in skills from before and after training is also influenced by characteristic factors, such as age and parity. Most of the respondents are middle adulthood and have 2-3 children. This period is a period of establishment for individuals so that they will be able to play an active role in society and social life. They will spend more time sharing their experiences. Intellectual ability, problem solving and verbal abilities have almost no decrease in individuals in the middle adult period[12]. Majority of cadre jobs were housewives so they have free time to learn new skills. The average family income is IDR 2,800,000 so income of the respondent's family is above the UMR Regency of Badung[23].

The cadres mostly have children 2-3 people so that they have sufficient experience to care for children and have skill of SDIDTK well. SDIDTK can be carried out properly if the examiner can cooperate with his children and caregivers. They like to train themselves with new skills and enjoy sharing with the community. Nirwana, Utami IH, and Utami HN (2015) research in Malang shows cadres had dedicated themselves as health promoters in their villages and were very motivated to help other women to maintain their health, such as cervical cance desease[24]. It seems with study by Peter NA et al (2015) who examined *training* to health cadres in conducting the first pertologan on accidents in Africa. Cadres become competent and able to do help after training[25]. Similar research by Gutnik L (2016) in Malawi that training can increase competence of health cadres to conducting breast cancer screening to the community[26].

Conclusion

There was an increase in knowledge, attitudes and skills of health cadres before and after training on SDIDTK . Knowledge with a median of 75 to 90 (p $value \leq 0.05$) . The attitude with a median of 72.7 to 80 (p $value \leq 0.05$) and Skills with a median of 78 to 91.3

(*p value* ≤ 0.05) .

Health workers, especially midwives may conduct ongoing training so that cadres always get refreshments and skills about SDIDTK. The policy holder of the Puskesmas is to increase the participation of health cadres to stimulate and detect child growth and development . hould have further research on training methods suitable for health cadres.

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