Competency of Tuberculosis Instructor after Training with Citizenship Behavior-Based Organizational Training Management

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Abstract

BACKGROUND: The success of the health extension program depends on the performance of health extension workers in carrying out their roles and functions professionally. The education and training they have attended influence the professionalism, competence, and performance of tuberculosis instructors.

AIM: This study aims to analyze the competency of the tuberculosis instructor after training by the organizational citizenship behavior-based training management model.

METHODS: A prospective cross-sectional interventional study with baseline and repeat surveys was conducted to evaluate the effect of organizational citizenship behavior-based training management. Education and training of public health instructors are carried out for 3 days. The participants were 60 people from 30 community health centers selected simple random as an intervention and control. Competency data were measured through a questionnaire and analyzed by statistical independent t-test using SPSS software.

RESULTS: Independent t-test statistical test was shown that the management of education and training based on organizational citizenship behavior was effective in increasing the competence of tuberculosis instructors (p = 0.001).

CONCLUSION: Organizational citizenship behavior is a description of the positive behavior of employees, namely, their behavior will exceed the competence of the organization. Management of training based on organizational citizenship behavior is an alternative to conducting training as a way to develop the quality and skills of tuberculosis instructors and human resources in health institutions, in general, more effectively and efficiently.

Introduction

Community health extension has a very important role in the process of community empowerment, namely, obtaining learning from, by, and with the community by the local sociocultural environment so that the community can help themselves in the health sector. Community health extension has various roles, ranging from extension workers, developers of health promotion methods, consultants or counselors, and scientific and applied researchers, to the management of health promotion strategies. The success of community health extension greatly impacts disease prevention and control programs in Indonesia [1], [2], [3].

The high number of people with tuberculosis in Indonesia puts Indonesia in the third position with the most tuberculosis sufferers in the world. In 2019, the number of tuberculosis patients was 842,000 cases found every year. However, of that number, only 53% were reported. In North Sumatra, the data obtained at 34 Deli Serdang District Health Centers in 2018 were 3253 cases, in 2019, there were 3478 cases, and in 2020, there were 2771 cases (Deli Serdang District Health Service Report 2021) [4]. According to research Qureshi et al., 2008, the main cause of the increasing burden of TB problems, among others, is due to the management of education and training of health extension workers such as the management of training for tuberculosis extension workers has not been running effectively so that prevention programs and programs to cure pulmonary tuberculosis in the community are not running [5]. The success of the health extension program depends on the performance of health extension workers in carrying out their roles and functions professionally. The professionalism of the performance of public health extension workers is influenced by the education and training they have attended [2], [3].

This article contributes to the theoretical and empirical literature on organizational citizenship behavior (OCB) and the effectiveness of OCB-based TB instructor training management. The holistic perspective of health-oriented OCB is still lacking [6]. OCB is defined as voluntary and individual work behavior that has positive consequences for the organization but is not explicitly recognized by formal reward mechanisms. They include assisting and supporting coworkers on work issues, volunteer involvement in internal initiatives...
and events, and providing advice to improve the efficacy of management systems and procedures. OCB enables organizations to maintain compliance with formal procedures and structures while pursuing performance improvements through proactive and voluntary daily initiatives of the workers [6], [7], [8], [9], [10].

Several studies have comprehensively investigated OCB as it relates to people and work situations. Boyatzis and Ron point out that finding the right people in an organization is not easy because what is needed is not just people who are better educated or talented. However, there are psychological factors that underlie the relationship between a person and his or her organization. These psychological factors affect a person’s ability to organize, including the ability to manage oneself, initiative, optimism, organize emotions in oneself, and carry out calm thoughts without being triggered by one’s emotions. If an organization has employees with five dimensions of OCB behavior, it can be predicted that organizational productivity will increase [10], [11], [12], [13].

Human resources are the motor in administrative and management activities, without human activities cannot run well. The potential possessed by humans will give color to the implementation of administration; knowledge, expertise, and a person’s seriousness are the key to the success of an organization, government agencies, and institutions or company. Human resource performance is needed to improve organizational performance [2], [14]. OCB is important to achieve because it will make a positive contribution to the quality of work and organizational performance [15], [16]. An experimental study found that individuals with high levels of engagement through behaviors from OCB are more likely to complete tasks very well because they pay attention to tasks and dedicate themselves to their work. Job involvement has become an important issue, so considerable attention has been paid to the predecessors of work engagement [17].

Competency-based management perspectives have been developed in organizations to differentiate themselves from their competitors, thereby giving them a competitive advantage. It has been argued that effective human resource management in an organization is essential to meeting customer needs and expectations as well as to being one step ahead in a competitive world. In this case, people in the organization are expected to have the knowledge, skills, and behaviors necessary to realize the goals of the organization [2], [18].

The term “competence” was first coined by McClelland in 1973 and since then (McClelland and Boyatzis, 1982) together (Spencer and Spencer, 2008) has made significant contributions to the literature [19]. Uyargil, 2013, has defined competence as “observable individual knowledge, skills, attitudes, and behaviors and dimensions of the team, process, and organizational capabilities, which are associated with high performance and provide a sustainable competitive advantage for the organization” [20]. Competence has been defined as an outstanding characteristic of an individual that contributes to superior performance in his or her job (McClelland and Boyatzis, 1982) or an individual characteristic that is measured against some observable criteria and is associated with a causal relationship with outstanding performance [19], [20]. Since competence is a phenomenon that emphasizes the effective performance of an individual, it is necessary to determine the appropriate knowledge, skills, and behaviors that will form a common platform for achieving the required level of performance. The required competency profile must be defined according to the respective job in the organization, as each may require different sets and levels [8], [12], [20], [21], [22].

This study can contribute by advancing existing knowledge in a variety of ways. This study aims to analyze the competence of tuberculosis instructors after training with an OCB-based training management model. OCB has attracted considerable attention because of its impact on workgroup productivity and flexibility. The nature of OCB has long been debated and in particular, its dimensions, which have been examined using the following seven dimensions: Helpful behavior, sportsmanship, organizational loyalty, organizational compliance, individual initiative, civic virtue, and self-development. Prosocial behaviors are characterized by affiliation: They are geared toward helping coworkers and maintaining collaborative relationships within groups of coworkers. Proactive behavior is precisely characterized by a challenging nature and is directed to actively encourage positive change in the organization or work group. The role of OCB in increasing the effectiveness of formal organizational systems has been explored [6], [11], [22].

The originality in this research is the management model of the tuberculosis instructor training which is implemented into the education and training of tuberculosis extension workers. The findings of this study are expected to be used as a training model for tuberculosis extension workers in improving the performance of tuberculosis instructors by increasing their competence of tuberculosis instructors.

Methods

We conducted a prospective cross-sectional interventional study with baseline and repeat surveys to evaluate the effect of OCB-based tuberculosis instructor training management. The OCB-based tuberculosis instructor training management was conducted for 3 days. The population in this study were all tuberculosis extension officers in the work area of the Deli Serdang District Health Office, Sumatera Utara.

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Province, Indonesia (30 health centers). The entire population is used as a sample. The sample for this training was 60 people from 30 health centers. The size of the sample is adjusted to the maximum conditions of the training participants [23]. Two health workers were selected from each health center, namely, one TB officer who is a health worker who has the task of preventing and controlling tuberculosis, and one health worker who has the task of being an extension worker at the health center. The sample was divided into two groups, namely, 15 health centers (n = 30) as intervention and 15 health centers (n = 30) as control. The selection of the health center group as intervention and control was done by simple random.

The research process, in the intervention group, training was conducted using the lecture, role play, and discussion methods. The researchers developed an OCB-based training curriculum and syllabus that were piloted in small groups. The OCB-based training module and the preparation of OCB-based training management were carried out by researchers before the training intervention. To assess the success of the training, a pre-test was carried out before the training was carried out and a post-test after 1 month of training to measure the competence of public health instructors using a questionnaire created by researchers and has been tested to determine the validity and reliability. The training was carried out for 3 days.

In the control group, training was carried out for 3 days with classical management training which is usually done at the health center. The training was also carried out using lectures, role play, and discussion methods. Before the training, a pre-test was conducted and 1 month after the training a post-test was conducted to measure the competence of the public health instructor using a questionnaire.

As a research instrument, we assessed the competence of public health educators in the intervention group and the control group using a structured questionnaire. We maintain the sentence structure and format of the questionnaire to make it easier to understand. A panel of experts determined the content validity and we used a group of public health educators in different locations (n = 30) to test content validity before data collection. We tested the internal consistency (Cronbach’s alpha) with a result of 0.754 each. The questionnaire to measure competence consists of 25 questions containing knowledge, skills, performance, and organizational understanding. There were fifteen statements for attitude. For Knowledge Questions, if the answer is correct, a score of four is given for the correct answer and a score of zero for the incorrect answer. The maximum score for answering all questions correctly was given a value of 100. For the attitude assessment, with five answers, namely strongly agree was given a value of five, agreed on a value of four, disagreed with a value of three, disagreed with a value of two, and strongly disagreed with a value of 1. The maximum value of a positive attitude was seven twenty-five.

Data analysis, data were analyzed using the IBM SPSS version 25 program. The difference in the mean competence of instructors in the intervention group and the control group before and after training was analyzed by independent t-test with a significance level set at p < 0.05.

**Results**

Most of the respondents (26.7%) in this study were more than 40 years old, aged 45-49 and 50-54 years, respectively, by 20%, while respondents with age <40 years were 16.7% and age > 55 is 6.7%. The age group of most respondents is more than 40 years old, the subjects used as respondents are public health extension officers who have long been civil servants. In general, respondents (50%) have Diploma III education, SI/Bachelor in Applied by 46.7%, and Master is 3.4%. The education level of the respondents is mostly from Diploma III staff.

The influence of OCB training management on the competence of public health instructors can be seen in the table below.

From Table 1, it can be seen that the average performance of public health instructors before the training of public health instructors based on organizational citizenship behavior (OCB) was 50.27 with a standard deviation of 14.643. After training for public health instructors based on organizational citizenship behavior (OCB), the average competency of public health instructors increased to 86.63 and the standard deviation was 5.641 with an increase in average ability (GAIN) of 36.37.

**Table 1: The effectiveness of training for public health educators based on organizational citizenship behavior**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean ± SD (n = 30)</th>
<th>p value between group</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>50.27 ± 14.643</td>
<td>51.03 ± 13.594</td>
<td>0.988b</td>
</tr>
<tr>
<td>After</td>
<td>86.63 ± 5.641</td>
<td>52.60 ± 13.203</td>
<td>0.001a</td>
</tr>
<tr>
<td>Gain</td>
<td>36.37 ± 12.336</td>
<td>1.57 ± 1.633</td>
<td>0.001b</td>
</tr>
</tbody>
</table>

Source: Primary data (2021). The difference in mean between groups (pre-test treatment and pre-test control) was analyzed using statistical independent t-test, at a significant level of 5%, the difference in mean between groups (treatment and control gain) was analyzed using the independent t-test statistical test, at a significant level of 5%. SD: Standard deviation.

In the control group, it was seen that the average competency of the public health instructor in the first measurement was 51.03 with a standard deviation of 13.594. The average competence of public health instructors at the initial stage of the measurement was not much different, namely, 50.27 in the treatment group and 51.03 in the control group, and from the independent t-test statistical test, it showed that there was no difference in the
average competency of public health educators at the beginning of the measurement both in the group treatment and control group (p = 0.988). After the second measurement in the control group, the average knowledge rose to 86.63 and the standard deviation was 12.366 with a mean increase (GAIN) of 36.37. From the statistical independent t-test, it showed that there was a difference in mean competence between the treatment group and the control group, which means that the training of public health instructors based on organizational citizenship behavior (OCB) is effective in improving the competence of public health instructors (p < 0.05).

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The independent t-test statistical test showed that there was a difference in mean competence between the treatment group and the control group, which means that organizational citizenship behavior (OCB)-based public health instructor training is effective in improving the competence of public health instructors (p = 0.001).

Discussion

**Trial of organizational citizenship behavior (OCB)-based training management model**

Our findings in this study indicate that there is an increase in the competence of public health instructors after training based on organizational citizenship behavior. This happens because we have designed a training management model based on organizational citizenship behavior (OCB) with a training management approach by applying management theory [24], namely:

- Planning is an important factor in a training program. Good planning will be able to assist the organizing agency in carrying out its activities in an integrated manner so that it can achieve maximum results. The objectives of training planning are to systematically determine the stages of the training activities to be carried out; determine the aspects or elements that are the focus of the implementation of the training; determine the model used in the design of the training; and determine the materials, media, and methods used in the implementation of the training. According to Roesminingsih, 2009, training planning includes setting training objectives, developing training strategies, and determining training methods [25].

At the planning stage, the following activities are carried out; first: (a) Analysis of training needs, (b) determine the target of training, third, develop a curriculum, and training syllabus, (c) creating a training guide and determine the learning method, (e) determine the learning facilities and infrastructure provided, (f) determine the Widyaiswara criteria for facilitators, (g) selection of training participants, and (h) determine training costs. Second; make a training schedule (training rundown) which consists of basic material, basic material, and supporting material, the number of learning hours is 32 h consisting of theory and practice which is carried out through zoom for 3 days. Training is said to be effective if the results of the training can achieve organizational goals, improve resource capabilities, satisfy customers, and can improve internal processes [26], [27]. By the meaning of effectiveness mentioned above, effective training is process-oriented training, where the organization can implement systematic programs to achieve the goals and desired results. Thus, training is said to be effective if the training can produce human resources who increase their abilities, and skills and change more independent attitudes.

The preparation of training and development programs, by the objectives to be realized, must be carried out by following certain systematic steps. The steps for organizing the training and development program include: Organizing the implementation of the field trial model as one of the stages of activities to carry out training after the planning stage is taken, namely, the organizing stage where the author is carried out to carry out steps that support the smooth implementation of training as a field trial process, namely, to determine the five supporting factors, namely:

1. Conduct research and collect data on aspects of the object to be developed
2. Technical preparation;
   a. Determining the material
      The training materials used in the implementation of the developed training model are based on the results of the identification of participants’ learning needs, and the objectives have been formulated. The training materials use sources in the form of learning materials compiled by resource persons/researchers. The training materials, in addition to referring to the results of the identification of needs and formulated goals, are also adapted to the guidelines specified in the competency standards of public health instructors. The material is packaged according to the needs of relevant training with efforts to increase the competence of public health instructors.
   b. Determine training and development methods

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Training or training is usually carried out so that employees are more skilled in carrying out their duties, especially if there is a new technology that they must master. However, training can also be provided so that employees have new insights or abilities that can support their duties in the office. Training can be conducted internally or externally. Internal training means that the training takes place within the company environment. In practice, trainers can come from the company itself or the company cooperates with other companies to organize training. Usually, cooperation is carried out with companies that provide the necessary training or training services. Meanwhile, external training is carried out by sending employees to training institutions or agencies to attend training there.

c. Choose a trainer or facilitator as needed

Learning competency improvement training aims to improve the competence of trainees so that they can carry out the learning process well for health services. The expected results are mastering professional and pedagogic competencies by the competency units studied and having the performance and character as educators for their students Widyaaiswara as educators have roles and functions that greatly determine the quality of each education and training activity. Widyaaiswara not only functions to educate, teach, and train in a narrow sense but he also functions as a facilitator, moderator, consultant, dynamist, inspiration, researcher, and even must be able to be a leader and protector as well as a servant. In other words, Widyaaiswara has a very important role in realizing the quality of learning in a training. The training facilitator is by the needs of the model trial that focuses on the action process in the model testing and is based on the planning as determined.

d. Prepare the necessary facilities and infrastructure

Moenir, 2008, argues that facilities are all types of equipment, work equipment, and facilities that function as the main/auxiliary tool in carrying out work, and also in the context of interests related to work organization. The researcher also conducted a feasibility test of the hypothetical model with this internal FGD. The results of the focus discussion group activities at the INTERNAL TEST stage were obtained to Sugiyono, 2017 [28]. The results obtained from this research are the value of the product design is tested and feasible so that it can be continued to be made into a product. In addition, health management and education management system design experts have been tested by experts and practitioners. This means that quantitatively, the design of the organizational citizenship behavior (OCB)-based training management model for improving the competence of public health educators in tuberculosis prevention is considered feasible to be implemented.

**The effect of OCB training management on the competence of public health counselors in prevention of tuberculosis**

The training management model based on organizational citizenship behavior (OCB) is effective and has a positive effect on the competence of extension workers and the results of our study are in line with research by Naderi and Hoveida, 2013, which states that OCB has a positive effect on employee competence [29]. The results of the study by Soelton, 2020, also found that there was an effect of OCB on employee competence [30].

OCB in the training curriculum provides benefits for efforts to increase learning competencies, which, in turn, will improve the performance of public health instructors. This training model shows that it is effective in improving the competence of public health instructors, which is expected to have an impact on improving the performance of public health instructors. Thus, this training management is one of the alternatives in education outside of work, as a way to develop the quality and skills of public health educators, and human resources in health institutions, in general, more effectively and efficiently. Effective in the sense that this training model is empirically proven to be able to improve the competence of public health instructors who can directly practice what is taught, and is said to be efficient because the use of this training model is carried out practically by public health instructors in carrying out their duties as health services in the community. So that it is more relevant to the needs of public health educators.

According to Robbins and Judge, the facts show that organizations that have employees who have good OCB will have better performance than other organizations. According to Robbins, employees are said to have good OCB if they show several behaviors, make constructive statements about the organization and their work groups, avoid unnecessary conflicts, help other employees in a team, volunteer for extra work, respect the spirit and content of the organization’s rules, and generously tolerate occasional work-related losses and distractions [6], [7]. The results of OCB-based training verify a positive relationship between the overall objectives of developing an OCB-based training curriculum and its five dimensions. A possible reason for this result may be because it helps trainees identify their strengths and weaknesses and improve their job competency skills. These improvements are important for public health outreach work in TB prevention.

Our study found that OCB-based training management positively promoted the overall OCB...
training curriculum and its five dimensions which effectively increased the competence of public health educators. Similarly, OCB saving organizational resources can significantly improve the contextual performance of an organization. The role of organizational citizenship behavior (OCB) through the dimensions of “Altruism, Conscientiousness, Sportsmanship, Civic Virtue, Courtesy,” in improving the competence of public health instructors, altruistic behavior is very necessary to be carried out as a tool that is very helpful in carrying out work. With the behavior of Altruism, work will be completed quickly and will establish a good emotional relationship. Employees who assist other employees are not their main task. Through the conscientiousness dimension, public health educators at the PKM have seen it, because the employees have a sense of responsibility and obligation at work as health workers. Through the dimensions of sportsmanship, public health educators at the PKM have tolerance for the PKM. When there are less than ideal conditions, they do not disseminate the conditions in the PKM to the general public, public health instructors always maintain the good name of the PKM. Through the civic virtue dimension, public health educators at the PKM always follow the associations in the PKM because it is for the progress of the company itself. Through the courtesy dimension, public health instructors at the health center’s courtesy behavior have been seen to be shown by the public health educators always following the changes and developments that exist, even creating changes and developments to bring the PKM to a better direction.

OCB is a picture of the positive behavior of employees, namely, their behavior will exceed the competence of the organization. Increasing organizational commitment needs to be continuously developed by creating good relationships and a conducive work environment – a family atmosphere – and open leadership. This condition will make communication between employees easier and more comfortable so that work commitment will increase. Increased work commitment must also be based on a good work environment to create job satisfaction. A good OCB will contribute to the organization so that it can improve its performance. Human resources with good competence can be obtained through best practices in human resource management. Improve staff competence, it can be done through training and development programs to improve performance [16].

According to Edison et al., 2018, competency assessment is based on several reasons, namely [31]:

1. Management needs to know the ability of employees (or those assessed) in carrying out their duties.
2. Management needs to ensure that employees have worked properly by the goals of the company or organization.
3. Management gives a signal to employees that every process and result achieved will be assessed and rewarded according to the contributions and achievements achieved.

Based on some of these opinions, it can be concluded that the evaluation of training must use criteria that can help obtain results. The criteria in the evaluation process include participants’ reactions to the training program, changes in participants’ knowledge and experience, participants’ attitudes and habits, personal and organizational assessments, and cost-effectiveness by the training plan. Based on the opinions above, the evaluation criteria cover several points including changes in attitudes and skills, participants’ reactions to the implementation and training activities, knowledge gained, and the final results obtained from the training.

The development of a favorable working environment is very important to create a team that is committed according to their competence and performance. In other cases, a behavior-based OCB taxonomy was proposed and operationalized by many researchers [32]. The results of the research on the OCB-based training management model to increase the competence of public health instructors in preventing TB disease are a combination of Terry’s management model and the results of needs analysis and research findings at the research locus, namely, the OCB dimension. The results of this study provide a new contribution for health resource managers in the management of education and training. OCB-based training management to improve the competence of public health instructors in preventing TB is an alternative model for implementing training for public health instructors.

Conclusion

The independent t-test statistical test showed that there was a difference in the mean performance between the treatment group and the control group, which means that the training of public health instructors based on organizational citizenship behavior was effective in improving the competence of public health instructors (p < 0.05). OCB is a picture of employees’ positive behavior, that is, their behavior will exceed the competence of the organization.

Data collection using purposive sampling is the main limitation of this study which failed to generalize the results. All data were collected only from the community health centers in Deli Serdang Regency. The sample consisted of only 30 community health centers, which appears to be more homogeneous, thus, future researchers could cover other wider areas to ensure heterogeneous demographics.
Ethical Approval

Informed consent was submitted to the prospective respondent. The researcher explains the aims and objectives of the research. Researchers ensure the confidentiality of all information provided by respondents and are only used for research purposes. Prospective respondents are not willing, researchers do not come and respect the rights of prospective informants. Before the implementation of the study, the researcher had obtained ethical clearance approval from the Health Polytechnic Ethics Commission of Poltekkes Kemenkes Medan 2021.

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