

The Application of Lesson Study in Education of Stunting Prevention

Kasmita¹, Nur Indrawaty Lipoeto², Ali Khomsan³, Mudjiran⁴, Hardisman⁵

¹Student of Doctoral Program of Public Health Sciences, Faculty of Medicine, University of Andalas, Padang; ²Public Health Faculty of Andalas University Padang, Indonesia; ³Bogor Agricultural Institute, Indonesia; ⁴State University Padang, Indonesia; ⁵Faculty of Medicine Andalas University of Padang

ABSTRACT

Background: The concept of Lesson Study (LS) has been used in the field of educational science. In the time being, Lesson Study is a concern in the health sector, due to health problems, especially stunting, which enable it to be prevented through education, especially education for mothers of toddler. This is an important factor to educate mothers of toddler with good use of lesson study. The purpose of this article is to summarize previous studies of the literature on Lesson Study, which is based on learning education for adults with applications that might be applied in educating these adults. It is hoped that the education provided through lesson study may help in improving the knowledge and attitudes of mothers of toddler in the purpose of stunting prevention efforts.

Method: The method used is by finding the keywords likes: education, andragogy, Lesson Study application techniques, health promotion, and media and adult learning methods.

Finding: 128 articles are reviewed and then the data extracted to: (1) reveal reasons for implementing Lesson Study, (2) identify the benefits of Lesson Study, (3) describe facilitators and obstacles to implementing Lesson Study.

Conclusion: Lesson Study includes: analyzing community needs about what they need to know, planning learning, community training/education sessions, communication technology, process mapping and reflection. So from that the health sector in the application of Lesson Study with the opportunity to analyze their needs for learning, designing the strategies used, implement and evaluate the Lesson Study system needs to be conducted. While further research needs to be done about the best way to do this lesson study so that it is applied to the health sector, especially in educating the public so as to provide a basis for preventing stunting.

Keyword: Lesson Study, Education, stunting.

Introduction

Health problems that have not been resolved until now one of them is stunting. The National Team for the Acceleration of Poverty Alleviation noted that there were several obstacles in the implementation of stunting prevention, including: the limited capacity and quality of program organizers, the limited number of health

workers and the lack of competency in implementing programs¹. In addition, there is still a lack of advocacy, campaign, and dissemination related to stunting and prevention efforts.

In general, people do not realize the importance of nutrition during pregnancy and the first two years of life. The Minister of Health, Antara (2017) explained that: "Women must increase their knowledge about nutrition, so that they can prevent cases of stunting in children or stunting. The nutrition education program that has been carried out in the form of counseling and counseling is felt to be ineffective. This happens because learning/counseling is done on a monologue basis. Monologue learning has not involved students directly in the learning process it self².

Corresponding Author:

Kasmita

Student of Doctoral Program of Public Health Sciences,
Faculty of Medicine, University of Andalas, Padang

Email: kasmita70@yahoo.co.id

Education for adults (toddlers' mothers) is very important. This is very possible, because adults are part of the community who will take strategic decisions in the family. Education carried out aims to change the mindset of society towards nutrition and health, so as to be able to change people's attitudes in preventing stunting.

Education or learning in adults is a specific one. According to Makarao (2009) and Kartono (1992), adult learning is assumed that, the more mature students are, then: 1) self-directed behavior and mutual learning, 2) their learning orientation changes from mastery of material to problem solving abilities, 3) mastering ability in carrying out real life tasks, 4) requires self involvement in planning, implementing and evaluating learning (problem centered-orientation)^{2,3}.

The activity of planning the learning process, one of which can be done with lesson study. Lesson studies have developed in Japan since the early 1900s. In the 1970s the Japanese government benefited from *konaikenshu* and since then the Japanese government has encouraged schools to implement *konaikenshu* by providing cost support and incentives for schools that implement *konaikenshu*. The reason why lesson study in Japan is popular is because lesson study is very helpful for teachers. Although lesson study takes time, the teachers benefit greatly from valuable information to improve their teaching skills.

Lesson study not only helps students find their problems in learning, but also finds problems faced by the teacher in delivering material⁴. The advantages of applying study lessons in improving the quality of learning are: 1) Can be applied to all classes both schools and communities, 2) Encourage and assist in overcoming problems in learning, 3) encourage students to be more active in a pleasant learning atmosphere, 4) Participants students help each other in understanding the material, 5) encourage students to think and work as well as possible.

Lesson studies have long been developed in Japan and have been proven to improve the quality of learning. In addition, lesson study can improve communication and teacher competence⁵. Through the application of lesson study in adult learning, especially for mothers of children under five, it is assumed to have a positive effect not only for mothers of children under five, but also for

instructors (health workers and cadres). The purpose of this study is to implement effective nutrition education for the community with the lesson study approach to stunting prevention, test the effectiveness of application of Lesson Study (ALS) in educating the public to prevent stunting and to find nutritional education programs to prevent stunting for the community.

Method

Literature Review: Lesson Study is identified by using electronic databases or browsing articles, journals, theses, dissertations and other research related to community health, andragogy, and health promotion. The searches were limited to English and Indonesian articles published from 1970 to 2019. In the literature search, the author read, summarized and summarized the contents of articles or journals independently, to identify themes to fit the theme written. Most articles are presented in the form of research, case studies, grounded theory or research methodology. Articles that have been collected, identified, and used to support the basic ideas of this study.

Result

Through 128 articles collected, after identification, 32 articles were obtained that did not meet the criteria, leaving 67 articles used in expressing, (1) reasons for implementing Lesson Study in the community, (2) identifying the benefits of Lesson Study, (3) describing the facilitator and obstacles to implementing Lesson Study.

Reasons for applying Lesson Study: Health efforts sourced from the community cannot be separated from public education. Low parental education has a greater risk of malnutrition status compared to highly educated parents⁶. The nutrition education program that has been carried out in the form of counseling and counseling is felt to be ineffective. This happened because learning/counseling carried out by health workers was carried out on a monologue basis. Monologue learning has not directly involved the community in the learning process itself. It is necessary to find a solution in the process of nutrition education to the community. Behavioral problems that often arise in adult education programs, namely, get new things, arise incompatibility (feeling bored), grandiose theory (difficult to practice), new recipes/instructions (independent), not specific and difficult to accept changes⁷.

Adults have a tendency to orient themselves toward solving life problems⁸. Because learning for adults is a need to face problems in life³. Before learning to the community begins, it must be planned in advance. Planning is an effort to involve the community in the learning process. The activity of planning the learning process, one of which can be done with lesson study. Lesson study not only helps students find their problems in learning, but also finds problems faced by the teacher in delivering material^{4,8}. The advantages of applying study lessons in improving the quality of learning are: 1) Can be applied to all classes both schools and communities, 2) Encourage and help in overcoming problems in learning, 3) encourage students to be more active in a pleasant learning atmosphere, 4) Participants students help each other in understanding the material, 5) encourage students to think and work as well as possible¹⁰.

The community needs to be empowered in teaching the community itself. This is in accordance with the concept of lesson study, where learning is done by including from planning to evaluating the effectiveness of the learning provided. Lesson study carried out has a cycle that includes planning (plan), implementation (do) and reflection (see)¹¹. The success of lesson study is not a person's achievement in a moment, but is a result of the collaboration of many parties⁹. This means that lesson study applied in the nutrition education process is a collaborative effort between health workers, cadres and the community, with the aim of improving the quality of nutrition education, which is carried out on an ongoing basis.

Lesson study applied in adult learning has a positive impact, because collaborative learning fosters enthusiasm for learning because there is involvement of participants in the learning process¹². Teachers can always conduct evaluations on each process that has been carried out. This can improve teacher competency¹³. In addition, by implementing lesson study in learning provides a positive effect for teachers and students.

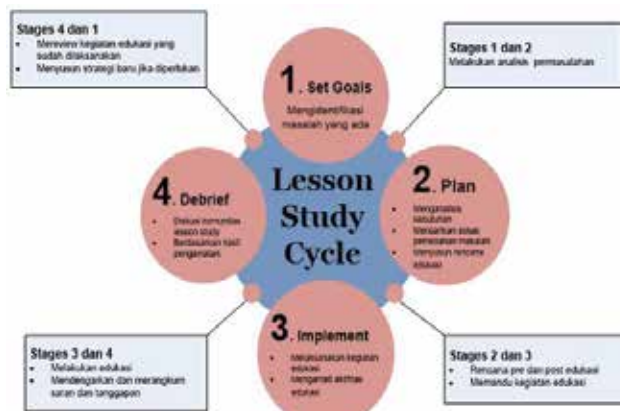
Lesson study can help improve the quality of learning. In this dissertation concept, the principles of lesson study are used to find the problems faced in providing nutritional learning to the community, help find solutions to those problems, plan how best to implement the solution and evaluate the implementation of learning that has been planned together between the community, staff health and cadres. Combining learning models and lesson study in nutritional learning in the

community, is expected to be able to concretize effective learning/prevention of stunting.

Through the stages in lesson study, the community together finds what material they need so that they know about nutrition, parenting and healthy living habits. While health workers and cadres were helped to find out what material should be given, how the strategy for delivering the material, so that collaboration between the community, health workers and cadres was formed. A distinctive feature of learning in adults is learning together with colleagues, finding problems faced and solving problems together. Learning that is based on needs will foster interest in knowing about nutrition, parenting and healthy living habits. If community interest has grown, it is expected that there will be an increase in nutritional knowledge, changes in attitudes and healthy behavior in the community.

Solution and Strategy: Implementation of Lesson Study in Formal Classes

Lesson study is a process of learning implementation which consists of several stages in Mulyana, mentioning there are four stages in doing lesson learning, namely: 1) Analysis Phase (identification), 2) Planning Stage, 3) Implementation Phase, 4) Reflection Stage¹⁴.



Picture 1: The Lesson study Cycle

- 1. Analysis Phase (identification):** Planning begins with setting learning objectives, analyzing the needs and problems faced in providing education.
- 2. Planning Phase:** Get around the lack of learning facilities, and collaboratively find solutions in solving problems faced by teachers in providing education in the classroom.
- 3. Implementation Phase:** At this stage there are two activities, namely the implementation of

learning activities carried out by one of the agreed instructors or at one's own request to practice the learning plan that has been compiled together and observation activities carried out by other instructors acting as observers or observers.

4. Reflection Phase: This stage was carried out in the form of a discussion attended by all observers in the lesson study implementation activities guided by a facilitator. The discussion starts from conveying the impressions felt during practicing learning. Furthermore, all observers submit comments or suggestions wisely on the learning process that has been carried out supported by evidence obtained from observations, not based on their own opinions. This is done as an effort to improve the learning process going forward.

Application of Lesson Study in Non Formal Classes: In this informal class, it is conducted on very heterogeneous communities. Learning or education is based on the theory of learning in adults (Andragogy). According to Lunandi (1987) and Knowles (1970), the teacher's own abilities must also be improved, because teaching adults requires strategies and methods tailored to the abilities of adults^{15,16}. Besides the limitations possessed by adults such as the ability to understand a material, feeling bored faster, the limited time available, should be the attention of the teacher in choosing the methods, strategies and media used¹⁷.

The application of lesson study to stunting prevention education is oriented towards improving the quality of non-formal learning. Modified the application of lesson study to this educational process. Modifications include the place of study, time of study/duration, participants and instructors as well as the learning environment. The process carried out at each stage of lesson study also undergoes modification, but it is still implemented using the lesson study cycle. If in the implementation of lesson study in class, the more instrumental is the teaching community, namely the teacher lecturer, but in the Lesson Study Application (ALS) the teacher and participants collaborate to achieve the learning objectives that have been set together. In ALS, students are mothers who have stunting toddlers and mothers who have children under five with normal nutritional status. This is intended to fulfill the characteristics of adult learning, which tends to study with peers. In ALS teaching is not a teacher or lecturer, but health workers (health workers) are in charge

of providing counseling to the community and posyandu cadres. This is done because health workers and cadres in the health education and promotion program carried out by the government are nutrition counseling staff and have close relations with the community, especially mothers of children under five.

Study of Limitations: The main limitation of this review is that most of the research in English has been included in databases of the social sciences and humanities. There is also another disadvantage is the consistency of research design included in the review using different methodologies.

Conclusion

There are several obstacles in the implementation of the acceleration of stunting prevention, including: Limited capacity and quality of program organizers, limited number of health workers who provide counseling to the community. Besides the limited number of health workers, the government is also faced with the problem of lack of competency of officers in carrying out the program (WHO, 2018)¹. 5) Still lack of advocacy, campaigning and dissemination related to stunting, and various prevention efforts. The limitation of organizing nutrition intervention programs, has not shown a significant impact in preventing stunting and improving child nutrition. Several studies have been conducted in countries with high prevalence of stunting, such as Peru, Vietnam, Indonesia and Bangladesh, recommending that the importance of a national campaign to encourage public awareness about stunting.

Prevention of stunting itself must get the right response, concrete evidence found the importance of implementing lesson study to educate the public. The advantages of implementing lesson study in improving the quality of learning are: 1) Can be applied to all classes both schools and communities, 2) Encourage and assist in overcoming problems in learning, 3) encourage students to be more active in a pleasant learning atmosphere, 4) Participants students help each other in understanding the material, 5) encourage students to think and work as well as possible.

Lesson study applied in the nutrition education process is a collaborative effort between health workers, cadres and the community, with the aim of improving the quality of nutrition education, which is carried out on

an ongoing basis. In addition, lesson study is a transition and if possible further research must apply this education to make changes in public education.

Author Contributions: K leads at the beginning of article search, identification, writing and review analysis. NI leads in the identification of additional articles, analysis, weighting of articles and writing. I give ideas for research, and help compile research designs, revisions and finalizations. M assists in the supervision and revision of research, especially regarding research methodology. H helps in revisions, identification of additional articles, evaluation of articles and rearranged until the end of article writing.

Source of Funding: State University Padang, Indonesia,

Conflict of Interest: The authors declare that there is no conflict of interest.

Ethical Clearance: Health Research Ethics Committee, Faculty of Medicine Andalas University of Padang

REFERENCES

1. WHO. *Reducing Stunting in Children*. Equity considerations for achieving the Global Nutrition Targets 2025.2018.
2. Makarao. NR. *Metode mengajar Dalam Bidang Kesehatan*. Bandung: Alfabeta.2009.
3. Kartono, Kartini. (1992). *Pengantar Ilmu Mendidik Teoritis: Apakah Pendidikan Masih Diperlukan?*. Bandung: Mandar Maju
4. Rock, Tracy C., & Wilson, Cathy. *Improving Teaching Through Lesson Study*. *Teacher Education Quarterly*, 2005.
5. Surianna, N., & Fransiska. S., Program Lesson Study Untuk Meningkatkan Kompetensi Pedagogi Dan Profesional Guru Paud Di Sekolah. *Jurnal Pendidikan dan Pembelajaran*. 2014.Vol.21 No.1.
6. Eko, Juliawan. D., Prabandari, Yai. S., Ninuk, S., & Hartini. *Evaluasi Program Pencegahan Gizi Buruk Melalui Promosi Dan Pemantauan Pertumbuhan Anak Balita*. *Jurnal Berita kedokteran Masyarakat*. 2010.Vol.26 No.1.
7. Yusnadi. *Andragogi Pendidikan Orang Dewasa*. Program Pascasarjana Universitas Sumatera Negeri Medan.2004
8. Ahmuddiputra, Euh, Atmaja, Basar, Suyatna. (1989). *Pendidikan Orang Dewasa*. Jakarta. Karnika
9. Suratno, T. *Teacher reflection in Indonesia: Lessons learnt from a Lesson Study Program*. Paper presented in Redesigning Pedagogy International Conference. National Institute of Education. Singapore, 2009.1-3.
10. Junaidi I. *Stroke A-Z*. Jakarta: Gramedia, pp: 1-47.2004.
11. Anisatul F. *Implementasi Lesson Study Untuk Meningkatkan Kinerja Dosen Matematika STMIK Bangsa Surakarta*. *Jurnal Derivat*. 2016 Vol.3 No.2. Hal.17-24.
12. Corke. L.C. *Building Pathways For Future Learning With Japanese Lesson Study*.Conference Proceedings. Adult Education Research Conference. 2014. Kansas State University.
13. Nancy Lee Ming See. *Mentoring and Developing Pedagogical Content Knowledge in Beginning Teachers*. *Procedia - Social and Behavioral Sciences*. 20014. 123:53 – 62
14. Hendayana, Sumar, et.al., *Lesson Study, Suatu Strategi Meningkatkan Keprofesionalan Pendidik (Pengalaman IMSTEP-JICA)*, (Bandung: FPMIPA UPI dan JICA, 2007)
15. 14.Lunandi, A, G. *Pendidikan Orang Dewasa*. Jakarta: 1987. Gramedia.
16. 16.Knowles M. *The Adult Learner A Neglected Species*.1986 London. Gulf Publishing Company.
17. 16.Sudjana. *Strategi Pembelajaran*. Bandung: Falah Production.2005.