Community Diagnosis and Health Management of Migrant Workers in Camps: Participatory Action Research

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ABSTRACT

The purposes of this study were to community diagnosis and to establish a guideline for health management of migrant workers in the camp by participatory action research from public, private and worker sectors. The sample was selected from 340 migrant workers in a factory camp in the southern part of Thailand, a systematic sampling method and sixteen working groups from two public, six private people and eight migrant workers. Potential development tool the working group is a workshop. Advanced tools to community diagnosis survey based on a set of health index six of forty nine indicator steps written program/projects/evaluation. Questionnaire results the knowledge, attitude, practice, participate and barriers to waste management. Content validity of the developed test was verified by the item-objective congruency index (IOC=1). Its reliability was verified by calculation of Kuder-Richardson 20 (K-R20). The results were compared to learning pre-post after the development of the potential customer satisfaction and engagement. T-test was used for data analysis. The results of the study were as follows: 1) Community diagnosis was found that the health problems of migrant workers have 25 indicators that compared with standard in Thai people. 2) The problem of the community diagnosis was waste management. 3) Working groups guidelines on the management of waste in camp three plan and six projects. 4)The results were to make a comparison between before and after the development of the potential form the community diagnosis and the written program/projects/evaluation found that the working group on an average scores to post the trainee more than pre the trainee was statistically significant at 0.05 levels.

Keywords: migrant workers, Participatory action research, public sector, private sector, worker sector, Community diagnosis

1. INTRODUCTION

Millions of people are migrating because of economic, political and social issues. In recent years, Thailand had become the most developed country in the Greater Mekong sub-region offering more employment opportunities and higher wages than any of its neighbours. Significant economic disparity can be demonstrated by comparing Thailand, s per capital gross domestic. (Martin, P., 2007; Lunjawee, A., 2014) Thailand needs more labor because of the shortage of labor, so migrant workers are a major human resource to fill the labor market in Thailand. Migrant workers have a positive effect: increasing productivity, solving the problem of decreasing output, generating revenue from fees, stimulating the economy in the host country. The negative impact is on population size change and population growth, mortality rate, population density in urban and industrial areas. The impact on the Thai labor movement, which resulted in lower Thai labor costs. The major impact is the health problems of migrant workers, for example, unpaid costs, infectious diseases, reproductive health from unwanted pregnancies, abortion, sexually transmitted diseases, Low birth weight, infant and postpartum mortality and health risk behaviors, quality of life issues and Mental health. (Chanthavysouk, K., 2013; Raks Thai Foundation, 2014: Lunjawee, A., 2014) The development and management of health care for migrant workers should be able to keep up their own health adequately, continuously and leadership that a good health under the constraints of public health staff and workload. Strategies to solve the health problems

of migrant workers in the community to be effective and effectiveness. It should be from participant of public, private and worker sectors. (Krajangtum, K., 1990;31-37)

Encouraging migrant workers have a role and take part in managing their own health in the form of agents that working together as a team. The potential development of the working group is a workshop to explore health issues, select health issues, define joint solutions, and evaluate participatory approaches. Represented migrant workers can transfer their health knowledge to migrant workers.

2. AIM

The purposes of this study were to community diagnosis and to establish a guideline for health management of migrant workers in the camp by participatory action research from public, private and worker sectors.

Ethic

The study is based on the analysis of data collected prospectively in the program. The source data were encrypted and the extracted data were anonymous. The authors were obtained the consent for the study from the ethics committee at the Health System Management Institute (HSMI) prince of Songkla university**.**

Statistical analysis

Statistical analysis was carried out using the methods of descriptive statistic. The results were compared to learning pre-post after the development of the potential customer satisfaction and engagement. T-test was used for data analysis. A $p<0.05$ was considered statistically significant. There was no missing data. Analysis was performed using SPSS statistics Bass 17.0 for window EDU S/N 5065845 (SPSS inc. Chicago USA).

3. METHODS

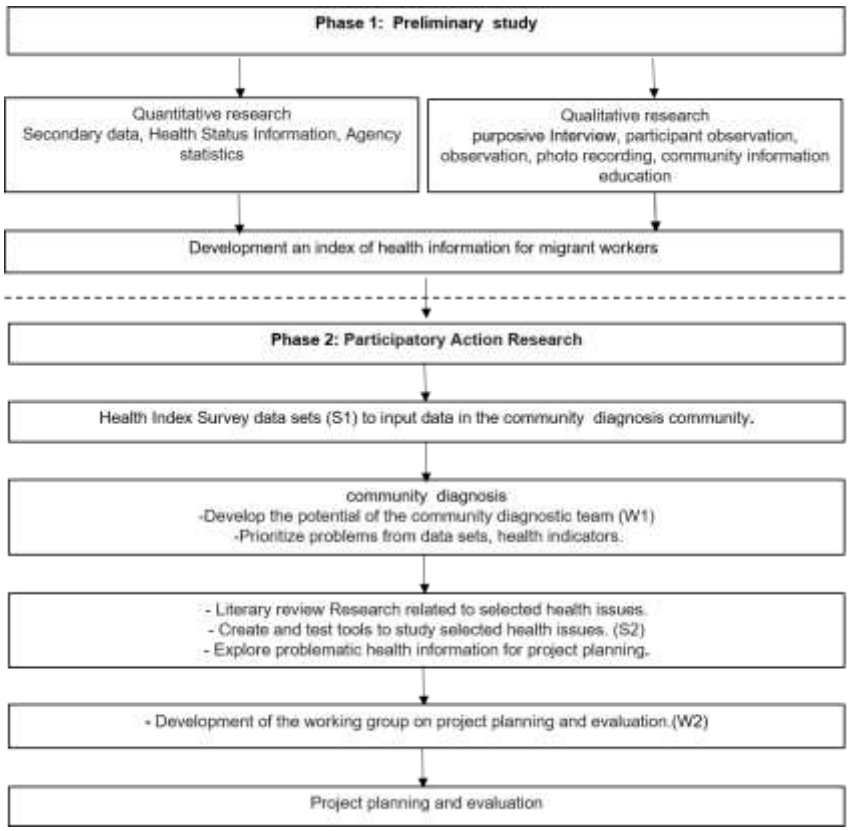

Figure 1: Overview of research flow chart

4. RESULTS

This study was divided into two phases: Phase 1: Preliminary Study and Phase 2: Participatory action research.

Phase 1: The preliminary study aims to study the basics of camps.

There was health problems and needs in the management of migrant workers in the camp and role the barriers of past health operations. The study design qualitative research by documentary study and purposive Interview. The key informants 7 is represented by establishments and health care providers, including two hospitals, Khohong District Health Promotion Hospital and director of the Khohong Health Care Center. The results are shown in Table 1 and Table 2

Table 1 vital statistics of foreign workers in the camp (n = 340)

vital statistics	Number (%)
Birth rate	0.4
Mortality rate	0.0
Natural increase	0.4
Moving rate	4.68
Moving rate	4.68
Abortion rate	19.5
Infant mortality rate	6.4
Newborn death rate	3.7

Table 2 Number and percentage of migrant workers in the camp (n = 340)

general information	Number (%)
Age Mean = 29, S.D. = 7.356, Min = 18, Max = 54	
Sex	
Meal	126 (37.1)
Female	214 (62.9
status	
Singer	119 (35)
Marriage	207 (60.9)
Widow	5 (1.5)
Divorce	4 (1.2)
Separate	5 (1.5)
race	
Myanmar	336 (98.8)
Lao	3 (0.9)
Nationality	
Myanmar	253 (75.7)
Mon	73 (21.9)
Kachin	2 (0.6)
Karen	6 (1.8)
Cambodia	1 (0.3)
Religion	
Buddha	338 (99.4)
Islamic	2 (0.6)
Education Level	
Uneducated	19 (5.6)
Pre-primary	107 (31.6)
Primary	146 (43.1)
high school education	64 (18.9)
Diploma	1 (0.3)
Bachelor	2 (0.6)
Number of household members Mean = 1.94, S.D. = 0.302, Min = 1, Max = 3	
The relevance of the members together	
Family	34 (11.0)
Brethren	9 (17.4)
Husband and wife	
189 (54.7)	
Friend	43 (12.6)
Relative	18 (5.3)
Moving job	
Never move job	317 (93.2)
Ever move job	
23 (6.8)	
Duration of work in Thailand Mean = 4.68, S.D. = 2.278, Min = 1, Max = 15	
During the work on this plant Mean = 4.24, S.D. = 2.087, Min = 1, Max = 10	

Table 3 Summary of health indicators for migrant workers in the health index survey (S1)

INDICATORS	STANDARD	SURVEY RESULTS	RESULTS
1. LIVING STATISTICAL INDEX AND GENERAL INFORMATION			
1. BIRTH RATE (PER THOUSAND POPULATION)	0.4**	1.3	NOT ACCEPT
2. MORTALITY RATE		0	ACCEPT
3. NATURAL GROWTH RATE		1.3	ACCEPT
4. MOVING RATE		4.68	ACCEPT
6. INFANT MORTALITY RATE PER 1,000 LIVE BIRTHS.	6.4**	10.3	NOT ACCEPT
7. NEWBORN DEATH RATE (UNDER 28 DAYS)	3.7**	3.59	ACCEPT
8. AVERAGE INCOME (BAHT / PERSON / YEAR)	>30,000*	>86,400	ACCEPT
9. PERCENTAGE OF GETTING ANNUAL CHECKUPS	95*	75	ACCEPT
10. HEALTH INSURANCE COVERAGE AND MEDICAL ELIGIBILITY	98.3**	100	ACCEPT
2. HEALTH STATUS INDEX			
1. ACCIDENT RATE OF WORK	102.5	179.0	NOT ACCEPT
2. OUT-OF-WORK ACCIDENT RATE	60.9	141.0	NOT ACCEPT
3. TRAFFIC ACCIDENT RATE	18.1	41.0	NOT ACCEPT
4. DIARRHEA RATE	1756.5	1,872*	NOT ACCEPT
5. DENGUE FEVER	267.4	125*	ACCEPT
6. TUBERCULOSIS	11.88	900	NOT ACCEPT
7. MALARIA	6.41	6,200	NOT ACCEPT
8. SYPHILIS	3.08	900	NOT ACCEPT
9. DIABETES	175.3	67.5	ACCEPT
10. HYPER TENSION	109.5	53.0	ACCEPT
11. PEPTIC ULCER	362.53	62.0	ACCEPT
12. DEPRESS	18.0	333.3	NOT CCEPT
13. SUICIDE	35.0	14.7	ACCEPT
3. HEALTH BEHAVIOR INDEX			
1. PERCENTAGE USING A CONDOM WHILE HAVING SEX WITH A NON-WIFE PARTNER.	57.0**	78.6	ACCEPT
2. PERCENTAGE HELMET WHILE RIDING A MOTORCYCLE AND THE PILLION.	100 *	88.9	NOT ACCEPT
3. PERCENTAGE OF PEOPLE 15 YEARS OLD EXERCISE AT LEAST 3 TIMES A DAY, 30 MINUTES PER DAY, OR EXERCISE / CONSECUTIVE FOR AT LEAST 10 MINUTES, COMBINED 30 MINUTES A DAY, AT LEAST 5 DAYS	60*	24.1	NOT ACCEPT
4. PERCENT IN HOUSEHOLDS WITHOUT SMOKERS	90* 79.3**	83.5	NOT ACCEPT
5. PERCENTAGE OF HOUSEHOLD DOES NOT DRINK ALCOHOL	90* 67.7**	87.4	NOT ACCEPT
6. PERCENTAGE OF HOUSEHOLD DRINK ENERGY DRINK	32.3*	73.2	NOT ACCEPT
7. PERCENTAGE OF DRUG PURCHASES	0*	80.5	NOT ACCEPT
4. SANITATION AND ENVIRONMENT INDEX			
1. PERCENTAGE OF HOUSING IS STRONG	100*	100	ACCEPT
2. PERCENTAGE OF INHABITED DWELLINGS	95*	87.3	NOT ACCEPT
3. PERCENTAGE OF HOUSING IS WELL LIT	95*	98.2	ACCEPT
4. PERCENTAGE OF HOMES WITH TIDY, CLEAN AND HYGIENIC	95*		NOT ACCEPT
5. HOUSEHOLDS ARE NOT DISTURBED BY THE ANIMAL VECTORS	95*	8.5	NOT ACCEPT
6. WASTE MANAGEMENT	95*	35.9	NOT ACCEPT
7. COVER THE FOOD WITH CONTAINER	95*	99.4	ACCEPT
8. KEEP FOOD CONTAINERS PROPERLY	95*	99.4	ACCEPT
9. PERCENT WITH CLEAN DRINKING WATER AND ADEQUATE INTAKE OF AT LEAST 5 LITERS / PERSON / DAY	95*	99.7	ACCEPT
10. PERCENT IS ENOUGH WATER THROUGHOUT THE YEAR LEAST 45 LITERS / DAY	95*	100	ACCEPT
5. FOOD SANITATION INDEX			
1. PERCENTAGE OF HOUSEHOLDS WITH FOOD HYGIENE SAFETY STANDARDS.	95*	85	NOT ACCEPT
2. PERCENTAGE OF USING MIDDLE SPOON	95*	81.1	NOT ACCEPT
3. EATING COOKED FOOD	95*	79.3	NOT ACCEPT
4. HAND WASHING BEFORE EATING	95*	74.9	NOT ACCEPT
5. WASH THE HANDS AFTER THE EXCRETION	95*	78.7	NOT ACCEPT
6. USING SALT IODINE COOKING	95* 91.9**	99.4	ACCEPT
7. PERCENTAGE OF HOUSEHOLDS USING MSG.	70***	98.5	NOT ACCEPT
6. RREPRODUCTIVE HEALTH INDEX			
1. THE RATE OF FAMILY PLANNING IN REPRODUCTIVE AGE WOMEN ARE LIVING WITH A HUSBAND	70* 79.3**	87.85	ACCEPT
2. ABORTION RATE	19.54**	8.98	ACCEPT

Note: * Basic necessities in Thai people 2559, ** Survey results in Thai people 2559

Questionnaire results the knowledge, attitude, practice, participate and barriers to waste management. Content validity of the developed test was verified by the item-objective congruency index (IOC=1). Its reliability was verified by calculation of Kuder-Richardson 20 (K-R20). The survey based index series

healthy 6 (S1) 1) index data and vital statistics 2) index of the disease 3) index of health behavior 4) index of sanitary environment / waste disposal 5) index of food sanitation and 6) index of reproductive health. The researcher and translator, 3 persons, used the questionnaire in 2 languages, translated Thai and Myanmar, interviewed a random sample of 340 foreign workers. They used a systematic random sampling from 21 units (1 unit with 52 rooms).

After the survey data, the index of all aspects of health, which includes a set of 49 health indicators, metrics analysis criteria and compare which the standard of Thai people. To select the primary health indicators. This is the response to the problem selection process that will be solved in the next step.

Phase 2: Participatory action research**.**

The analysis found that health indicators of migrant workers is a problem for all 25 indicators, the results from the survey indicators of health problems, it is import to rank health issues in the process of development.

In the process of developing the Committee on Diagnostic Community Workshop (W1) made by the analysis of indicators of health problems are 25 indicators, the working group discussed the priorities of the issues dividing the ranks. Two groups of problems were identified: group of officials and representatives of sesame seeds using methods of the Faculty of Public Health, Mahidol University uses the criteria of the severity of problems, difficulties in solving problems and cooperation of the community. Then take each score plus or minus and sort the scores and compare them. The results of the two sequences were then taken into consideration by the selected questionnaire, based on the opinions of the working group and the results of the problematic scheduling.

Table 4: The priority health issues by officials of foreign workers in the camp.

ISSUE	SIZE	SEVERITY	DIFFICULTY	PARTICIPANT	PLUS	MULTIPLY
1. ACCIDENT RATE OF WORK	1	2	2	4	9	16
2. OUT-OF-WORK ACCIDENT RATE	1	1	2	4	8	8
3. TRAFFIC ACCIDENT RATE	1	1	2	4	8	8
4. DIARHEA RATE	1	1	2	3	7	6
5. PEPTIC ULCER	2	1	3	2	8	12
6. TUBERCULOSIS	4	1	3	3	11	36 (4)
7. MALARIA	1	1	3	3	8	9
8.SYPHILIS	1	1	3	4	8	9
9. DEPRESS	1	1	4	4	10	16
10. NO FAMILY PLANNING	1	2	3	2	8	12
11. DO NOT WEAR A HELMET WHILE DRIVING OR STACKING A MOTORCYCLE.	1	2	2	2	7	8
12. NO EXERCISE	4	2	2	2	10	32 (5)
13. SMOKING	1	2	3	3	9	18
14. DRINK ALCOHOL	1	1	2	3	7	6
15. DRINK energy drink	2	3	1	2	8	12
16. USE MSG TO COOK.	4	4	1	1	10	16
17. DO NOT USE MEDIUM SPOONS.	1	1	2	2	6	4
18. EATING COOKED FOOD	1	1	2	2	6	4
19. DO NOT WASH THEIR HANDS BEFORE EATING	1	3	2	3	9	18
20. DO NOT WASH THEIR HANDS AFTER THE EXCRETION	1	3	2	3	9	18
21. DO NOT SEPARATE WASTE BEFORE DISPOSING.	3	4	1	2	10	24
22. POOR VENTILATION IN THE ACCOMMODATION.	3	2	1	1	7	6
23. DISTURBED BY THE ANIMAL VECTORS	4	2	3	2	11	48 (3)
24. PERCENTAGE OF DRUG PURCHASES	3	2	3	3	11	54 (2)
25. BUY DRUGS THEMSELVES.	4	2	3	3	12	72 (1)

Table 5: The priority health problems of migrant workers by migrant agents operating in the camp.

ISSUE	SIZE	SEVERITY	DIFFICULTY	PARTICIPANT	PLUS	MULTIPLY
1. ACCIDENT RATE OF WORK	1	2	2	4	9	16
2. OUT-OF-WORK ACCIDENT RATE	1	1	3	4	9	12
3. TRAFFIC ACCIDENT RATE	1	2	3	3	9	18
4. DIARHEA RATE	1	2	3	3	9	18
5. PEPTIC ULCER	1	3	3	3	10	27
6. TUBERCULOSIS	4	3	2	2	11	48
7. MALARIA	1	3	1	3	8	9
8.SYPHILIS	1	1	2	3	7	6
9. DEPRESS	1	1	3	3	8	9
10. NO FAMILY PLANNING	1	3	3	3	10	27
11. DO NOT WEAR A HELMET WHILE DRIVING OR STACKING A MOTORCYCLE.	1	4	4	4	12	64 (4)
12. NO EXERCISE	4	2	3	2	11	48
13. SMOKING	1	4	1	2	8	8
14. DRINK ALCOHOL	1	4	2	2	9	16
15. DRINK ENERGY DRINK	2	3	3	3	11	54 (5)
16. USE MSG TO COOK.	4	3	0	1	8	0
17. DO NOT USE MEDIUM SPOONS.	1	2	4	4	11	32
18. EATING COOKED FOOD	1	4	2	3	10	24
19. DO NOT WASH THEIR HANDS BEFORE EATING	1	4	2	3	10	24
20. DO NOT WASH THEIR HANDS AFTER THE EXCRETION	3	3	2	3	11	54 (5)
21. DO NOT SEPARATE WASTE BEFORE DISPOSING.	1	2	2	1	6	4
22. POOR VENTILATION IN THE ACCOMMODATION.	4	4	3	3	14	144 (1)
23. DISTURBED BY THE ANIMAL VECTORS	3	3	3	3	12	81 (3)
24. PERCENTAGE OF DRUG PURCHASES	4	3	3	3	13	108 (2)
25. BUY DRUGS THEMSELVES.	4	2	3	3	12	72

Priority health problems of migrant workers can be a problem as two main groups: Group 1 self-care behaviors (drug use) Group 2 diabetes animal waste management and environmental sanitation. The researcher introduced two groups of health problems, asking for feedback from the working group to re-examine both groups and individuals. It was found that the working group selected the problem of waste management, diseases and animal diseases from waste the winner was 15:1.

Table 6: Paired simple t-test of knowledge before and after potential development of the community diagnostic team. (n = 16)

community diagnosis	N	Mean	S.D	P value
Pre	16	9.5	0.966	.000
Post	16	12.0	0.966	

The results of the Paired simple t-test showed that the post test scores were significantly higher than before the training at the 0.05 level.

Working together to prepare work plans / projects to resolve the garbage problem in the camp by strategic Primary Health Care Strategy and 3R are three plans. First, the communication programs, the study learning and health education programs individually. Second, the waste reduction program is comprised of a comprehensive waste disposal program, a garbage disposal project, and a waste disposal project for sale. The finally, program evaluation includes, the evaluation part of the team, the satisfaction rating ask migrant workers to the programs, assessing the prevalence of animal diseases and evaluate the effectiveness of the separations.

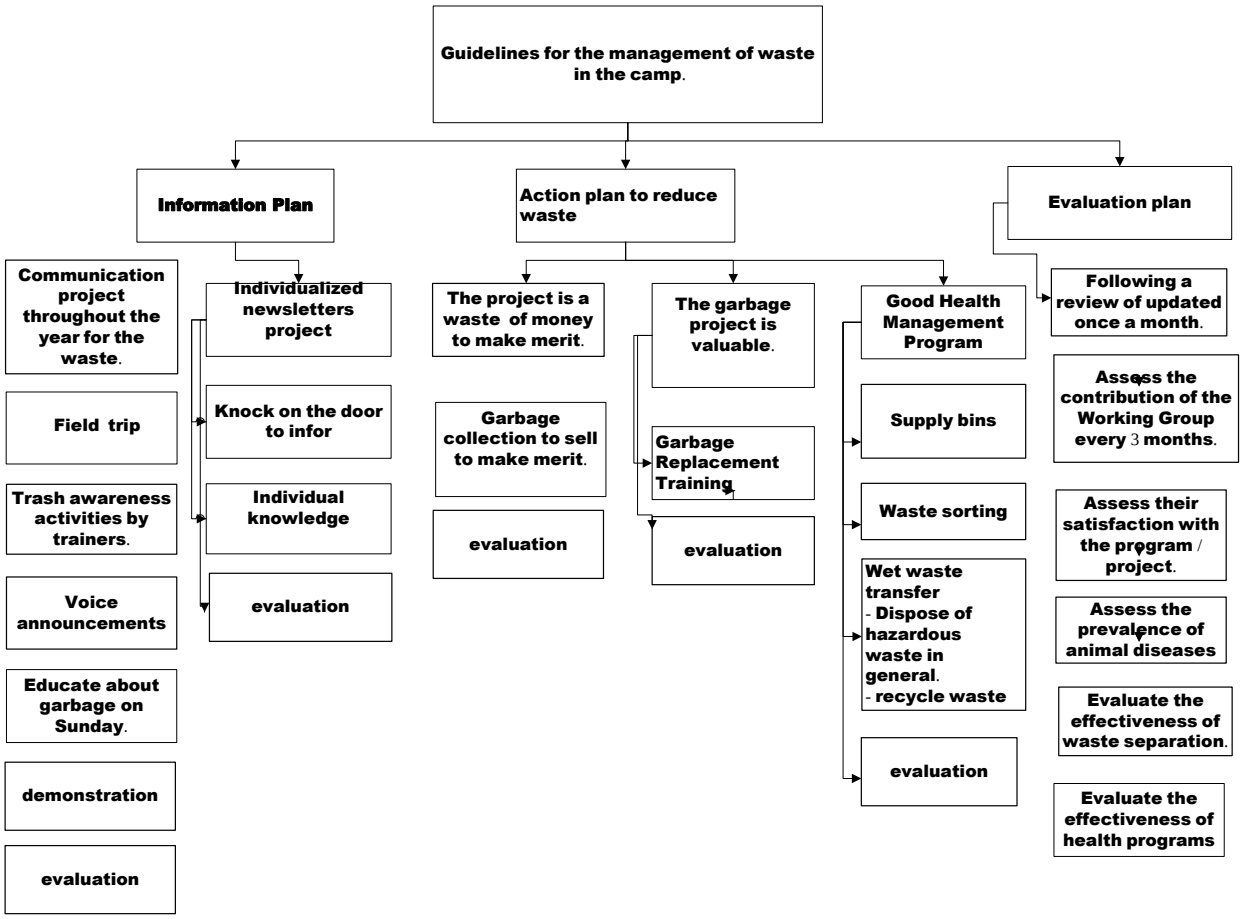

Figure 2: Establish a guideline for health management of migrant workers in the camp by participatory action research

The results of the working group involvement assessments of the health management program have increased.

Table 6: Compare the knowledge score before and after the potential development of the project / project planning team (W2

Knowledge	N	Mean	S.D	P value
Pre	16	14.68	2.33	.000
Post	16	18.56	0.96	

Based on the Paired simple t-test, it was found that the working group had a significant amount of knowledge about the development of the project / project planning (W2) working group after development significantly higher than before the development. At the 0.05 level.

5. DISCUSSION

All projects in the west management program of migrant workers in the camp are designed under the participation process. The team has the freedom to make every decision. In accordance with the concept of participating democracy theory (Mullikaman Staworn, 1992; 12-13) of Rousseau, there is a concept that participation must be based on freedom of deciding whether to choose engagement or not. The key must no one, and the participation is based on equality and self-reliance, resulting in awareness and recognition of self-engagement.

The main strengths of this process arise from the evidence-based and explicit approach. Decisions were based on information from research literature and local data collected for this purpose. (Felder, R. M., & Brent R.,2008)

The key strategies that make the practical research process succeed are: planning designed tools from the beginning before project, development of the working group by driving the health management of migrant workers in the camp, this needs to be prepared in the process and evaluate the use of the tool at any time. Strategies are planned and adjusted to develop potential when a barrier problem occurs during the research process. The results of the work are evaluated through the speaker assessment. Evaluation of the potential before-after development of the performance plan each time a clear time and achievement. Monthly monitoring and evaluation of performance to stimulate the work group and find out the obstacles to improve the solution throughout the program stage. (Whyte, W.F.,1991; James L. C.,2004)

Researchers have a significant emphasis on language limitations in communicating with migrant workers, with a solution since the development of the research project is to enable Myanmar interpreter to communicate in the meeting. (Human Rights Watch, 2011) Notice of the Interview the most targeted language of the process and research documents are used in Myanmar. Provide the language interpreter in which migrant workers are familiar to get access to information. However, researchers do not neglect the majority of migrant workers that cannot communicate in both Thai and Myanmar languages. Researchers provide translations that can communicate with migrant workers who cannot understand Myanmar, such as migrant workers, Mon descent, non-read and listening to Myanmar will have an interpreter that can communicate with Mon language and the use of an image communication to understand such workers.

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