Health Promotion for Thai Garment Factory workers

Researched and written
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EXECUTIVE SUMMARY

Due to an increasing trend in non-communicable diseases (NCD) among people in developing countries, health promotion has played an important role in NCD prevention. Managerial improvement is one of the areas that need special consideration. Therefore, the main objective of the study was to develop a managerial health promotion system in the garment industry located in Bangkok Metropolis.

The methodology of the study was an action research which was divided into two main phases, including a baseline survey and health promotion activities among 30 textile businesses (weaving and garment manufacturers) in terms of individual health, environmental health and health care systems. It was found that workers had poor health knowledge and poor health promotion behavior which could lead to an increase in personal illness and work absence. The environmental aspects were not supportive of a healthy atmosphere because the workplace had concentrated only on mandatory services. Therefore, a health promotion management system was developed using a system approach model (a model focusing on the relationships within the five system component of health promotion in the organization and the environment interaction) with full participation from all levels of staff in the situation analysis,decision-making, planning, implementing, evaluating and feedback.

The five components of health promotion system consist of management, resources, economic support, organization structure, and service delivery. These five

components of the health promotion system were analyzed prior to implementation. The Appreciation Influence and Control Process (AIC) was selected as an intervention to create overall participation.

It is suggested from the study that an effective health promotion management system using AIC process is a tool of management in developing health promotion in the workplace can be conducted with full participation of employees according to the five component system of the health promotion in their working environment. The designed comprehensive health promotion program (the combination the Five strategies of Ottawa Charter, namely building healthy work policies, creating supportive work environment, strengthening community action, developing personal skill and reorienting occupational health as well as other health services) was effective and satisfactory to the employees. However, the success of the program greatly depends on the awareness, acceptance, and support of top management level and the staff's willingness to participate.

Introduction:

A comparison of 1995 prevalence of non work-related illnesses and that of 1996 revealed a ten-fold increase(1). Meanwhile, a similar five-fold increase was observed with regard to occupational injury rates between 1988 and 1996. These changes also resulted in the dramatic increase of both worker's compensation and medical expenses during the past decade(2).

To improve efficiency of health care service and to reduce health expenditure, both the World Health Organization (WHO) and International Social Security Association (ISSA) recommend health promotion as a strategy to reform health care system(3) . Thailand has adopted this notion as reflected in the current 8th National Development Plan(4) for which health promotion has been widely encouraged.

From the 1986 Ottawa Charter(5) and recommendations from 3 subsequent international meetings on health promotion in Australia(6), Sweden(6) and Indonesia(6), several strategies have been extensively discussed. One of the promising strategies is the participatory approach for which both the health acre provider and the local people, such as factory workers, initiate health promotion scheme collaboratively.

The Appreciation-Influence-Control technique (AIC) has been widely accepted and implemented by numerous organizations(7). The technique is based on a fundamental concept that the most influencing factor for organizational change must stem from within that organization. Therefore, it emphasizes group meeting where all the stakeholders participate in the planning and implementation of organization activities, especially those related t quality management. This technique, thus, has a potential to be an appropriate tool for the initiation of health promotion activities in the workplace.

Garment factory offers an ideal workplace environment to deliver health promotion activities. The work practice itself requires teamwork: three levels of employees are selected from all section of every management level working on one task sequentially, thus, the fundamental concept of AIC technique is already favored. In addition, due to the relatively less hazardous work environment, the need for general health promotion is more visible among employees compared to other industry.

General objective

To develop a health promotion model for garment factory workers which can meet employee needs and satisfaction under the workplace environment and all stakeholders have the participation in planning and developing.

Specific objectives

1. To analyze health promotion situation in garment factory based on health promotion behaviors of employees, workplace environment, and health promotion system.
2. To create all relevant stakeholders' participation which starts from developing policy, decision making on operating method, and planning by using AIC technique.
3. To implement the health promotion model in garment factory regarding the action plan.

4. To evaluate and revise the health promotion model in garment factory according to Ottawa Charter health promotion activities to satisfy needs of all level of employees.

Methodology

To achieve such goals, the AIC technique is being introduced and implemented to successfully develop a comprehensive health promotion program. The methodology of the study is enumerated into steps: research design, population and sample selection, research instrument design, research methodology, data collection and data analysis.

1) Research design

The action research model, a continuous and systematic program encouraging participation and co-operation among members of the society, was applied to this study separating the research into two phases: Pre-development of health promoting management system (Phase I), a survey of existing health promotion system in the textile industry; and Development of health promoting system (Phase II), a study of the effectiveness of AIC technique under the system approach techniques in the garment factory (Figure 1). The action research was introduced herein to initiate participation among all concerned parties and ensure high effectiveness of the system model.

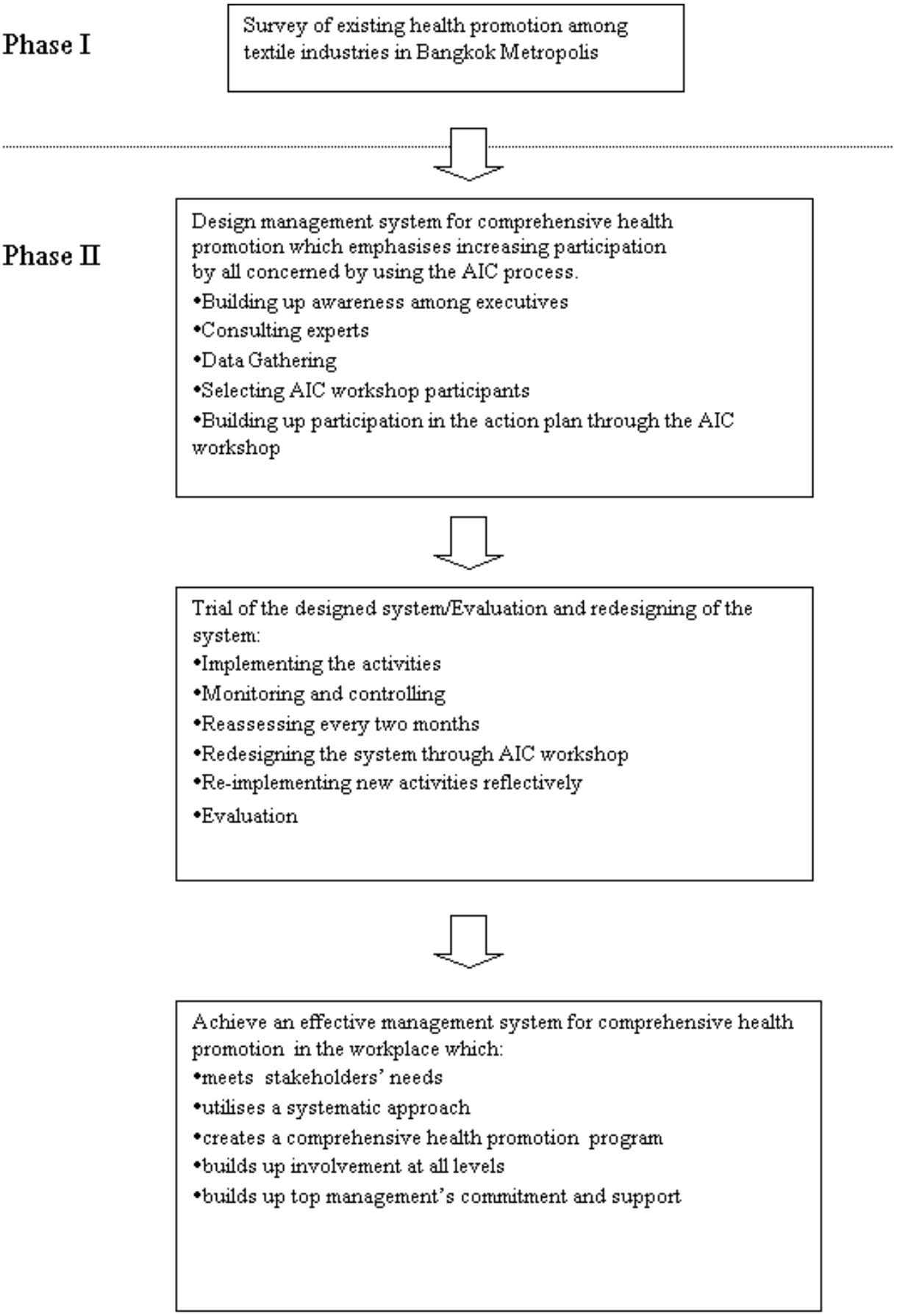

Figure 1. Action research model

2) Population and sample selection

The study population of the two phases was not the same group. The population of the Phase I was insured employees in 30 textile factories located in Bangkok Metropolitan area. These sample factories were selected out of 284 factories by multi-stage sampling techniques. From each factory, 10 workers were listed; therefore, there were 300 insured workers in total and a few numbers of executives to participate in the study. In the Phase II, the population was derived from 22 textile factories which were mostly garment manufacturers. Out of them, appropriate factories were cut down to only one establishment by purposive sampling technique and criteria setting.

3) Research instrument design

Interview, observation, a set of questionnaires and records were used as instruments in this study. There were six sets of questions comprising the format for the above tools.

- Set 1 the interview questions for insured persons on health promotion behavior
- Set 2 the questionnaire on satisfaction toward health promotion
- Set 3 the questions for environmental assessment
- Set 4 the interview questions on health promotion for top management of the industry
- Set 5 the questions used in the interview of the staff responsible for health promotion
- Set 6 the self evaluation form for quality improvement record
- Set 7 the questionnaire on participation in health promotion according to the AIC process
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4) Research methodology

- For the Phase I, reviewing theories as well as literature and carrying

out a survey research at the sample company

- For the Phase II, applying an action research in the AIC workshops through 4 steps; preparation, design of the management system, implementation of the health promotion program in the workplace, and evaluation of the outcome and performance.

5) Data collection

In phase I the research project collects and studies the baseline data of the existing health promotion over the three dimensions –individual health, environmental health and organizational health by taking interview and observation with the research instrument set 1 to 5. Also, it explores satisfaction of staff towards health promotion system in workplaces considering the correlation of each system component with the overall management system.

In phase II the primary data of the sample business was collected in three areas by the same collecting team and research instrument in phase I. For the AIC workshop the questionnaires done by participants were evaluated. During the implementation program regarding the action plan, there were the monitoring and controlling method in AIC workshop using a self-test (set 6). Then, the outcome and performance was evaluated using the interview with a questionnaire on participation in health promotion according to AIC process (set 7). Finally, the assessment outcome was done by comparing with the action plan and interviewing the participation about the change of health promotion(before and after) by using the research instrument set 1 to 5.

6). Data analysis

With the collected data, it is thoroughly analyzed by the statistical package. The statistics used in the analysis were descriptive statistics, correlation, one-way anova, T-test independent samples and Pearson's chi-square. From the correlation statistics , it was found that the management had the relationship with health promotion in the workplace and the AIC process also had the high relationship with health promotion in the workplace.

Results

In this study, the main output obtained was the development of a health promotion management system in the workplace. The development was undertaken by a system approach in management on the basis of participation by using AIC methodology. The findings highlighted the participative management of stakeholders in changing the health promotion program, and using government laws on occupational health, safety, and welfare. The new model was the comprehensive health promotion model that satisfied the needs of the employees and was appropriate for the garment businesses. The results of all four specific project objectives could be achieved as followed.

1. The situation of health promotion in the garment industry.

Phase I: the baseline data on the position of health promotion, undertaken by the spinning (8 places) and garment manufacturing business of the textile industry, was obtained from a survey conducted among 30 manufactures(22 places), in these aspects including personal traits, environment and health promotion system. It was found that employees had low education, especially in health promotion related issues. Even though their attitude was positive, their behavior did not reflect their attitudes. For instance, they had a tendency to consume junk foods, avoid doing exercises, usually smoked and drank, ignored using any safety device at work, and managed stress improperly. Even though the work environment was acceptable, some problems still remained, such as ventilation, drainage, accidents, and ergonomic problems. It was also found that the top management carried a low profile of health management knowledge and experience. The existing health related services, especially health promotion programs, were provided because of the Occupational Health and Safety government policy, not of their own volition. The healthcare expenditures were spent mostly for medical care (70%) but less for health promotion (30%). Moreover, the health promotion service model reflected very few activities on education and training about health behavior, while most of them were engaged in smoking, drinking and safety campaigns. When analyzing the components of the existing health promotion system, it was found that the executives provided some services to a certain extent, but these were not directly related to health promotion services. Since there was no specific health plan ever created in the workplace, allocation of resources and budget, organizational structure, and service provision were not available. The employees also revealed low satisfaction over the existing health promotion model because the management concentrated mainly on curative services.

When studying the correlation among the system components, the findings suggested that to the management's perspective the health promotion management system correlation with health promotion service delivery was the highest while to the staff's perspective the participative management had most correlation with the health promotion management system (Table 1). With the findings in Phase I, it guided how to design an effective health promotion model in the Phase II.

Table 1 The correlation coefficient between components of the health promotion system according to operating staff (n=300)

Component	Budget	Organization	Resource	Service	Total

Management	.329* (p=.000)	.566*(p=.000)	.566*(p=.000)	.653*(p=.000)	.824*(p=.000)
Budget		.276*(p=.000)	.209*(p=.000)	.229*(p=.000)	.561*(p=.000)
Organization			.467*(p=.000)	.600*(p=.000)	.770*(p=.000)
Resource				.642*(p=.000)	.744*(p=.000)
Service					.818*(p=.000)

- **p-value < 0.05**

2. Create all relevant stakeholders' participation using AIC technique.

The data derived from Phase I pointed out that the originators of health-related policy were the top management through a top-down management style. All of them were informed about the health promotion related information, problems, and needs of employees, as well as the AIC process technique through workshops that were proved to be effective in building up the participation among staff. In Phase II, the AIC workshop, one of the research tools, was first introduced and incorporated into the management system in every steps: planning, implementing, assessing and acting on requests for changes based on the realistic data. Vision and mission were formed up accordingly. Through the AIC process, the team learned about problems and barriers with which would help improve the system. Nevertheless, the implementation of action plan from the first workshop was not so successful as it encountered a number of problems such as narrow-spread of information, non-recognition of role among the team members, lack of participation, unattended meetings due to workload, etc. This resulted in the second AIC workshop being conducted later. The action plan was reviewed. Some techniques were also applied such as informal and unscheduled meetings, AIC newsletter and integrated media channels. Motivations were aroused with tactics and campaigns such as the bulletin board contest, the one-baht donation project (the collected money would support the "aerobic dance" fund), etc. Three months after the second workshop, it found that the employees were much more satisfied with the health promotion services (as clearly shown by statistic figures in Table 2).

Table 2 Satisfaction towards health promotion scheme after taking part in the program (n=300)

Items	Number	%
Not satisfied	3	1.0

Neutral	58	19.3
Satisfied	202	67.3
Highly satisfied	37	12.3

Another AIC workshop was set up by the AIC team under process C to further design and standardize the health promotion services. The employees from all levels throughout the company were asked to join AIC workshops and also the committees responsible for health promotion activities were appointed. This formed a stronger framework for resource management and organization in the location. The services provided were not only focused on mandatory actions but they became more relevant to meet the staff needs more closely. Overall, the performance of a comprehensive health promotion in the workplace could reach the goal according to established plans, which were drawn up by participation of staff at all levels, so as to meet the needs and satisfaction of staff under specific circumstances and the existing environment.

3. Implement the health promotion model in garment factory regarding the action plan

3.1. Appointment of the Health Promotion and Environment Protection Committee consisting of twenty-two members from the Occupational Health and Safety Committee, AIC team members and other relevant persons.
3.2. Feasibility study of the 10-project action plan for commitment and financial support. The feasible projects, adjustable to the current situation of the business and applicable to Roemer's health promotion system were selected. Two projects approved for implementation were exercise for good health (aerobics) and healthy workplaces. A "healthy day" was also conducted to provide knowledge and understanding on health promotion as well as to create the awareness and stimulate proper health behaviors.
3.3. Monitoring and control of project implementation. At first, the projects were not running as planned resulting from a lack of involvement. Therefore, the second AIC workshop was held among the steering team members to resolve the problem. The plans and strategies were thus reviewed and revised to increase participation such as continual education (via intercom, boards, knowledge corner, etc.), motivations (through board contest, etc.), the 1 baht donation for health promotion fund, training for aerobic instructors, and training on document procedures, etc.

4. Evaluate and revise the health promotion model to satisfy needs of all level of employees.

After implementing a comprehensive health promotion system in the garment business,

it was found that all participating employees had more knowledge and positive attitude towards health promotion and less risk behaviours. The surrounding conditions were improved by applying risk management over noise, dust and chemicals. There were safety inspections and line marking. A health promotion model in the workplace was adopted according to the Ottawa five strategies which included (1) formulating a healthy work policy; (2) creating a supportive working environment; (3) strengthening community activities with the AIC workshops and the one baht donation project; (4) developing personal skills such as exercise for good health (aerobics), healthy workplaces, board contests and (5) an integrated health promotion program in the occupational health and safety plan which was supervised by the Health Promotion and Environment Protection Committee. Regarding each element of the health promotion system, it was found that the business offered only health services limited to legal requirements and it showed strongly a top-down management style. Later, there were some changes in organisation. The style became bottom-up participative management. This style required the health promotion service to be responsive to the needs of the employees in their circumstances. The AIC process was proved to be an effective tool to create participation, which could be related to the system approach used in both planning and implementing the health promotion system.

It was concluded that the model introduced earlier had proved appropriate and effective in developing a health promotion management system in the workplace. The essential features of the study are summarised in Figure 2 as follow.

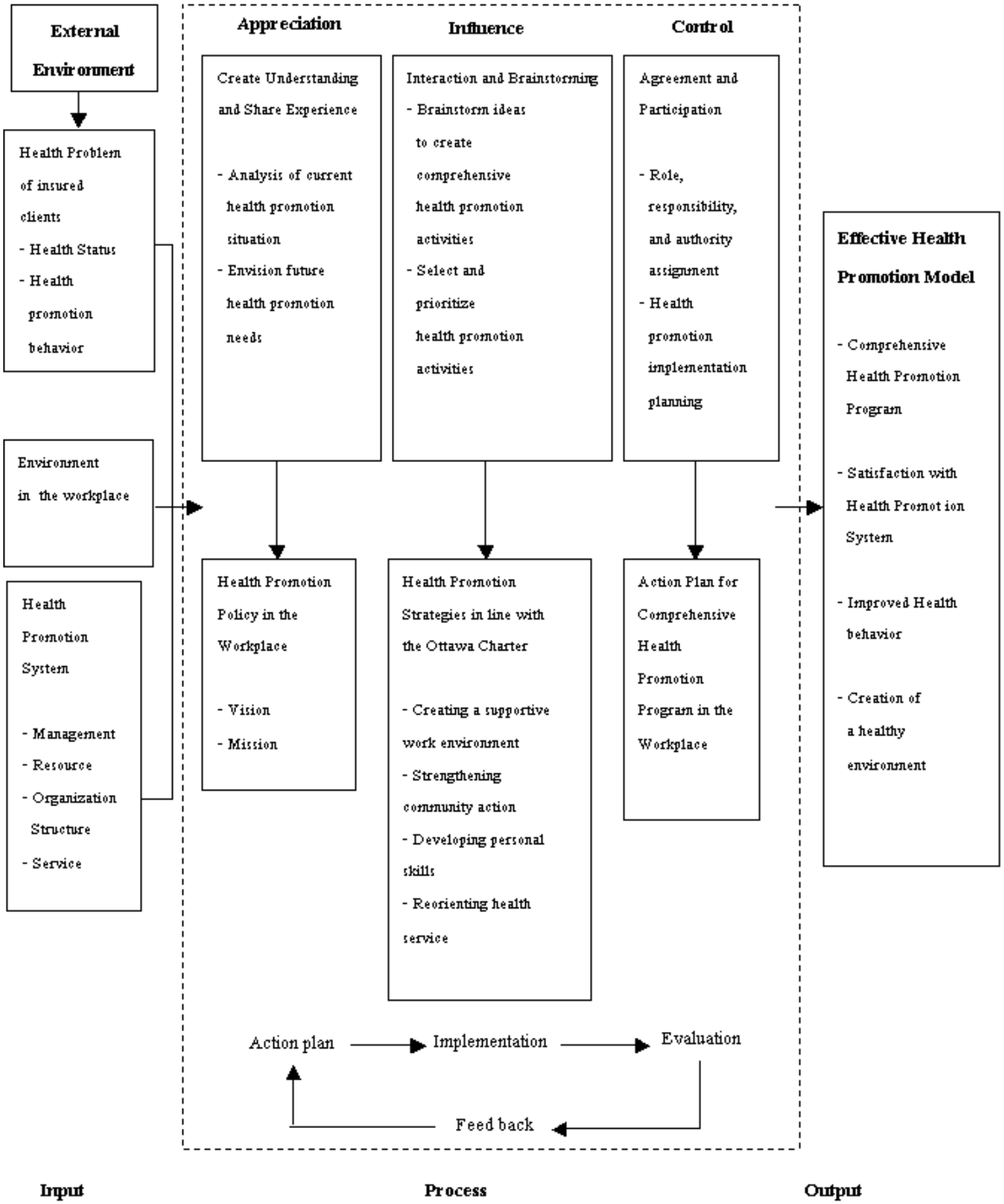

Figure 2 Appropriate model for a health promotion management system in

the workplace

Recommendations

The study has finalized a comprehensive health promotion model using the AIC process to successfully create participation. The researcher believed that the model could be applied to other workplaces or other types of industries with as much effectiveness. Other recommendations given here are based on the findings of the study. The top management should be well aware of the problems as well as needs of the employees on health promotion and intensively response to them. The health promotion system in the workplace should be set up in the workplace and continued with motivations initiated by the top management. The Government should play an important role in encouraging and providing knowledge on health promotion. The AIC process should be promoted to build up a participative atmosphere and help empower the employees to make decisions of their own. The health promotion program in the workplace is one of those needs to be fulfilled and supported from the management. To ensure the fruitful and prolonged success and smooth operation, after the program being implemented, the researcher suggested that the workers be aroused continuously with different motivations. Moreover, the concerned government agencies should act as a supporter and help establish health promotion system in every workplace.

LESSONS LEARNED

The study has finalized a comprehensive health promotion model using the AIC process to successfully create participation. The researcher believed that the model could be applied to other workplaces or other types of industries with as much effectiveness. It is obligation that the management has an ear on problems and needs of the employees and intensively response to them. The health promotion program in the workplace is one of those needs to be fulfilled and supported from the management. To ensure the fruitful and prolonged success and smooth operation, after the program being implemented, the researcher suggested that the workers be aroused continuously with different motivations. Moreover, the concerned government

agencies should act as a supporter and help establish health promotion system in every workplaces. However, the suggestion for future study should include the following issues.

1. There should be assessments of the impact of health promotion in the workplace after health promotion had been implemented. This is to examine the change in health behavior, absenteeism, and cost effectiveness.

2. A follow-up should be made on the aerobic dancing course in the workplace if it continues to be popular and it maybe appropriate for other garment business of every scale.

3. The health promotion management model that is the output of this research could be applied to other types of the industry and the variances and degree of success in these other industries should be studied.

4. Further research should be conducted on the comparison of health promotion behavior between employees in the Bangkok Metropolitan area, and those in the provinces, before and after the implementation of the health promotion system.

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Annexes:
(Detailed data and empirical evidence to clarify any issues under previous headings should be presented in annexes.)
Note: Use extra sheets as necessary.

Agenda of AIC implementation seminar

16 January 2000

09.00-09.30 AM	Registration
09.30-10.00 AM	Guest speaker introduction. Introduction to object and ice breaker activity
10.00-10.30 AM	Health promotion in our company in the present (A1)
10.30-10.45 AM	Break
10.45-12.00 PM	Health promotion in our company In the present (A1)
12.00-13.00 PM	Lunch
13.00-14.30 PM	Health promotion in our company in the future (A2)
14.30-16.00 PM	Brain- storming idea for health promotion activities in the future and priority setting of that activities.

23 January 2000

09.00-09.30 AM	Registration
09.30-10.00 AM	Review Picture of collective vision of previous day
10.00-10.30 AM	Finalize the whole picture
10.30-10.45 AM	Break

10.45-11.15 AM	Assign responsibility
11.15-12.00 PM	Develop plan for each activities
12.00-13.00 PM	Lunch
13.00-14.00 PM	Develop plan for each activities
14.00-14.15 PM	Break
14.15-16.00 PM	Present developing plan to top management

Health promotion system model.

Conventional model	Developed model
Management	**Management**
Leadership – Instruction	Leadership – democratic
Decision making – comply with rule, regulation	Decision making – participative approach
Rule, regulation – comply with laws	Rule, regulations – drawn up in collaboration
Information – distributed intermittently no feed back	Information – distributed continuously, and receiving unit of feedback is available
Resources	**Resources**
Human resource – no responsible person	Human resource – deploying by participative approach
Places – first aid section was available	Places – allocated by participative approach
Instruments – allocated by request from the personnel division	Instruments – procured as need
Technology – no knowledge on health promotion management	Technology – organize training on management and health promotion activities
Organization	**Organization**
Organization – not undertaking	Organization – horizontal holistic organization
Coordinating – top-down style	Coordinating – intersected style
Economic support	**Economic support**

Budget – allocation by mandatory tasks	Budget – participative approach
Service delivery 1. Safety and occupational health - Determining danger zone, nonsmoking area, and non-alcoholic areas - Annual physical examination 2. Welfare - First aid clinic - Provide training on health occasionally	**Service delivery** 1. Build healthy work policy 2. Created supportive work environment 3. Strengthen community action 4. Develop personal skills 5. Reorient occupational health services to be occupational health and safety, and health promotion