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Community-Based Risk Behavior Reduction Program for

Chronic Disease Prevention

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In Thailand, non-communicable diseases (NCDs), such as diabetes and hypertension, cause the deaths of up to 400,000 people per year, leading to an economic loss of approximately 1.66 billion baht, accounting for 9.7% of the country's GDP. These NCDs also result in premature death. A community health screening survey was conducted for residents aged 35 and over in Ban Sakaew Village, Moo 5, Sakaew Sub-district, Tha Sala District, Nakhon Si Thammarat Province, covering 513 people. The results revealed that 62 individuals were at risk of hypertension, 163 people were already diagnosed with hypertension, 65 were at risk of diabetes, 63 had diabetes, 85 were at risk of central obesity, and 55 had central obesity.

An analysis of the causes and factors contributing to chronic diseases in the community identified several environmental factors. Almost every store in the community sells alcohol, and alcohol is often served at community gatherings, leading to a culture of social drinking. Additionally, the easy availability of sugary drinks and alcohol in the community has encouraged people to consume more, increasing their risk of hypertension and diabetes. Furthermore, local eateries mostly serve food with monosodium glutamate (MSG), and many residents choose to consume food with MSG for better taste, which increases their risk of hypertension.

The health risks from these behaviors have resulted in various negative impacts, including physical, social, and economic consequences. Physically, people experience declining health and reduced work capacity, often leading to feelings of discouragement and despair. Socially, the burden on families increases, sometimes causing conflicts as one family member must take responsibility for caregiving. Economically, families face rising medical expenses. A lack of awareness and knowledge about NCDs, such as diabetes and hypertension, contributes to unhealthy dietary choices, such as consuming sweet, fatty, and salty foods, and leads to a lack of exercise.

Environmental factors also affect exercise behavior. Many people do not exercise due to time constraints, and those who want to exercise, such as doing aerobics after work, find that the timing does not match with the exercise groups. Although the community organizes aerobic and cycling groups, some individuals do not participate because they are not comfortable with these activities. Despite having sufficient exercise facilities, the lack of variety in exercise options suitable for different ages has discouraged some residents from exercising.

Health system factors, while there are screening activities conducted by village health volunteers (VHVs) and nurses, lack of ongoing risk reduction activities and sustained programs for healthy eating and regular exercise within the community.

To address these issues, the community has decided to focus on improving diet and increasing physical activity to reduce the risk of complications from NCDs. The “Community-Based Risk Behavior Reduction Program for Chronic Disease Prevention” was established, and its implementation includes the following activities:

1. **Village meetings:** A committee for the prevention of NCDs was formed, holding regular meetings.
2. **Survey and data collection:** Health data from at-risk groups was collected through screenings, including physical fitness tests, blood pressure checks, and blood sugar testing. Results showed that 50% of participants were at risk of diabetes, 25% were at risk of hypertension, and 25% were at risk of obesity or being overweight.
3. **Project introduction meetings:** The project was explained to the community, and agreements were made to control NCDs. Community members and network partners collaborated to design health promotion activities aimed at preventing hypertension and diabetes, such as exercise and healthy eating programs.
4. **Educational workshops:** Workshops were organized to educate participants on healthy eating and drinking habits, with a focus on reducing sugar and fat intake. People aged 35 and over in at-risk groups were encouraged to join the program.
5. **Environmental improvements:**
 - **Exercise groups** were formed based on preferences, such as walking, aerobics, and cycling. A community agreement was made for participants to exercise at least three times a week, with a group aerobic session on Saturdays.
 - A **community group chat** was created to track progress.
 - Agreements were made to promote “less sweet” drinks in local stores, with signs displayed encouraging customers to order beverages with less sugar.
 - **Restaurants** were encouraged to reduce the use of MSG and offer healthier food and drinks with reduced sugar and sweetened condensed milk.
6. **Group meetings:** Participants of the project regularly met to discuss progress.

7. **Behavior monitoring:** Health behavior changes were tracked, and the outcomes were evaluated.
8. **Knowledge exchange:** Forums were organized to share information and provide feedback to the community.

Results of the program:

1. A working group of 12 people was established, including VHVs, the village headman, public health officials, and the village council president.
2. After screening 85 participants, 50% were found to be at risk of diabetes, 25% at risk of hypertension, and 25% at risk of obesity or being overweight.
3. Community agreements were made regarding exercise, with participants engaging in their preferred activities 3-5 times a week and joining group aerobics on Saturdays. A “less sweet” beverage policy was implemented in local stores, and agreements were made to reduce sweetened drinks and salty foods in restaurants.
4. **Impact on knowledge and behavior:**
 - 90% of the working group increased their knowledge about healthy eating and exercise.
 - 85% of participants (63 people) reduced their consumption of sugary drinks.
 - 90% of participants (63 people) exercised at least three times a week and regularly joined group aerobic sessions.
5. Two exercise facilities were established, with exercise groups formed based on age and interest, including cycling, walking, and aerobics. All beverage shops cooperated in displaying "less sweet" signs and offered drinks with reduced sugar.
6. **Physical health improvements:**
 - 20 participants experienced a reduction in BMI after joining the program.
 - 90% of participants improved their eating habits by reducing salt intake, choosing less sweet drinks, and exercising regularly. Their blood pressure and blood sugar levels returned to normal.
7. Participants at risk of chronic diseases changed their behavior by engaging in regular exercise, joining group aerobics, drinking less sweet beverages, reducing MSG use in food, and avoiding excessively salty foods.
8. The program welcomed disadvantaged and migrant groups, with five migrants participating in activities.
9. The program fostered collaboration between community members and network partners, working together on exercise and healthy eating initiatives.

