

<b>TITLE</b>	The Development of a Model to Modify Caffeine Consumption Behavior as Bodily Stimulant among Working Aged Population
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### ABSTRACT

This is a research and development (R&D). Its purpose is to develop a model for modifying caffeine consumption as a bodily stimulant behaviors study of the working aged population (15-59 years). The arm research involves survey of caffeine consumption behaviors for stimulating bodies and influenced factors including 1,321 working aged participants residing in 11 communities located in Pakthongchai district, Nakhonratchasima province. Data is obtained by using an interview guide developed by the researcher based on Cognitive Social Learning (CSL); Self-Management (SM); and Social Support (SS). Its reliability is tested (Cronbach's alpha co-efficient = 0.80-0.85). The development arm involves action to develop a model for modifying the study behaviors. This part uses AIEC process, focus group discussion and caffeine consumption daily record form ways to disseminate health information and to generate self-management strategies to better caffeine consumption behaviors of risk participants. Data analysis uses percentage, mean, standard deviation, MANOVA and One-way repeated measures ANOVA.

The survey results show that all participants have consumed caffeine drinking beverages within the past month (mean 302.5 mg/day; 5.6 times/weeks), of which are: male 50.6%; mean age = 40.2±8.4; rice farmers = 29.4 %; and monthly income = 9,567 Baht. Their consumed caffeine products include hot coffee drinks (74.7%); energy drinks (66.5%); and canned coffee (61.7%). More than half of these working aged participants have moderate knowledge (62.8%). While their perception (beliefs values and attitudes) in caffeine consumption are moderate and highly appropriate (57.2%, 42.8%) their received social supports and self management behaviors for proper caffeine consumption are still low (73.4%, 100.0%). There are 948 of the participants with high risk

behaviors (71.8%) and such factors as age, occupation, average monthly income, knowledge, beliefs, attitudes, values, and social support related to caffeine consumption have found to affect the caffeine consumption as a bodily stimulant behaviors of this study group ( $p < 0.05$ ).

The “CAFFEINE model” has been developed to modify caffeine consumption behaviors of the high risk working aged participants to the more appropriate practice. There are 441 out of 948 high risk individuals (46.5%) who are willing to participate in the management program (males = 52.4%, mean age =  $40 \pm 8.5$  years, average monthly income = 9,594 Baht, rice farmers and working for wages = 30.2%, 24.0%). Each group receives a health management program including the following components: 1) An individual’s caffeine consumption record establishment; 2) Self-management, comprising workshops for 441 all of this high risk group of participants, provision of diary for self-evaluation of caffeine consumption, and distribution of health promoting materials; 3) Social support activities, including workshops for 55 community health communicators and 110 family health promoter, distribution of health messages through home visit activities, health medias developing and the village broadcast tower using, knowledge sharing, monitoring and assessment, competition, and coined. After 12 months, the CAFFEINE Model has successfully decreased the high risk caffeine consumption behaviors of this study group to the better conditions than baseline, both during and after implementation. These include the decline on: proportion of the high risk participants (Before = 100.0%, During = 51.5%, After = 39.5%); average daily quantity (Before = 375.30 mg, During = 217.88 mg, After = 149.73 mg) and weekly frequency (Before = 6.94 times, During = 5.24 times, After = 4.19 times) of caffeine consumption ( $p < .001$ ). In addition, this high risk group also demonstrates changes for the better conditions of: their knowledge, perception (beliefs, values and attitudes) toward caffeine consumption ( $p < .001$ ), their received social supports, and self-management of caffeine consumption behaviors ( $p < .001$ ).

Findings from this research and development study suggests for the more emphasis on appropriate caffeine consumption behaviors among the working aged population in a community setting using self-management strategies and social supports. These activities include provision of caffeine facts and health impacts, appropriate consumption dose, increased consumer protection and self-cautions about caffeine consumption promotion through media under the influence of coffee industries, and training community health communicators.

**Key Words:** Model; Consumption Behavior; Caffeine; Working Aged Population