

CHAPTER 1

INTRODUCTION

Background and Rationale

Over-the-counter (OTC) drugs are the most frequently used treatments for the minor illness symptoms (Stephens & Johnson, 2000; Wibulpolprasert, Chokevivat, & Tantivess, 2002). The symptoms that people were likely to self-medicate were cold, headache, pain, gastro-intestinal disorder, and skin disorder (Charupatanapong & Rascati, 1992; Thooptompong, 2001; Win, 1999). In Thailand, corresponding to symptoms, the first three drug groups that were purchased were analgesic and antipyretics, cough and cold remedies, and antibiotics (Sreprasert, Chaicharoen, Suitthimeathegorn, & Thanaviriyakul, 1999; Win, 1999).

In the U.S., the OTC category used most commonly also was analgesic (Stephens & Johnson, 2000; Stoehr, Ganguli, Seaberg, Echement, & Belle, 1997). OTC products are commonly used for self-medication at all ages of consumers. For example, from the interview survey study in 1992 (Kogan, Gregory, Stella, & Milton, 1994) found that 53.7 percent of 8,145 parents had given some forms of OTC drugs, most commonly acetaminophen or cold medications to their three-year-olds. Many older people also treat their own illness symptoms with OTC drugs. The results from the survey in 1996 of OTC drug use and the factors associated with OTCs use in the older population found that 28 percent of the time, older adults treated everyday health problems with OTC drugs (Stephens & Johnson, 2000; Stoehr et al., 1997). Eighty seven percent of these elderly were taking at least one OTC drug.

Several studies indicated that self-medication behaviors vary widely depend on many factors such as gender, age, socioeconomic status, lifestyle, health status, health care system and culture. For example, several studies during 1989 to 2000 in Thailand found that women were more likely than men to use nonprescription medicines and practice self-medication (Charupatanapong & Rascati, 1992; Sreprasert et al., 1999; Thooptompong, 2001). Moreover, some studies found that high educated Thai people tended to restrict their medications. On the other hand, low educated Thai people tended to consume many drugs available from convenience sources such as, drug stores and grocery stores (Thooptompong, 2001). The evidence of drug consumption behaviors and education level was different from the U.S. population. Leibowitz (1989) found that better-educated and more knowledgeable consumers used more OTC drugs and spent more of their drug budget on OTC products. Among Thais perception of disease severity seems to be the reason for self medication. The survey of drug use among Thai students revealed that if respondents perceived that they had mild symptom such as fever, and headache, they would self-care by using OTC drugs (Win, 1999). Conversely, if they had severe symptoms, they would see the doctor immediately.

In general, OTC drugs are widely used for self-medication and are viewed as safer than prescription drugs (Morris, Lechter, Weintraub, & Bowen, 1998; Morris, Ruffner, & Klimberg, 1985). Although OTC drugs are generally considered safe, they can occasionally cause significant and dangerous side effects, particularly when consumers overuse, misuse, or combine them with other drugs, foods, or medical conditions (Cirone, 1997; Ellen, Bone, & Stuart, 1998; Eliote, 2002; Johnson, 2001). Overuse of acetaminophen, for example, can cause liver problems. Overdoses of

cough and cold preparations can cause problems with heart rate and blood pressure. Taking antihistamine while driving can cause drowsiness and may result in accidents. To avoid such problems, giving sufficient and proper OTC drug information is important for consumer decision-making.

When consumers make decisions for purchasing OTC drugs, they rely on four sources of information: family and friends, advertising, product labels and health care professionals (Nonprescription Drug Manufacturers Association, 1992; Sangboonraung, 2002; Stephens & Johnson, 2000; Thooptompong, 2001). Advertising is one important source for giving OTC drug information to consumers. Several studies including those from Thailand indicated that consumers acquired information about OTC drugs through advertising (Bennoson, Daly, Bodger, & Heatley, 1997; Blenkinsopp & Bradley, 1996; Eppright & Cunningham, 1994; Sangboonraung, 2002; Strutton & Lumpkin, 1992; Thooptompong, 2001). Although, advertising is an important channel through which drug information can be communicated, many studies found that drug advertisements may not provide sufficient information on effectiveness, and sometimes were judged to be misleading (Chandra & Holt, 1999; Herxheimer, Lundborg, & Westerholm, 1993; Lal, 1998; Wilkes, Doblin, & Shapiro, 1992). In addition, Sansgiry, Sharp, and Sansgiry (1999) found that consumers were not able to identify advertisements that contained misleading and inaccurate information. Consequently, misleading advertisements could lead to inappropriate comprehension of product information resulting in product misuse and possible adverse events.

As aforementioned, information disclosures, which are usually presented in “adverse exposure conditions” are supposed to give supplemental information to aid

in consumer decision-making, as well to protect the advertiser from accusations of misleading or deceptive advertising (Foxman, Muehling, & Moore, 1988; Hoy & Stankey, 1993). To prevent misleading in advertising of OTC products, for example, the U.S. Federal Trade Commission (FTC) implemented the disclosure ruling to ensure effective communication with consumers. One important rule is that some or all of the warning information required in labeling for OTC drugs should be presented in advertising for those products. However, the U.S. FTC uses “clear and conspicuous standard” (Wilkie, 1987). The “clear and conspicuous” requirement is considered to be a general standard allowing the advertisers to carry out the disclosures in their own way. Therefore, the U.S. FTC proposed several conditions to meet the “clear and conspicuous” standard, focused on a televised advertising disclosure. To meet this standard, some conditions of the disclosures such as, modality, typeface, size, background, and presentation time were defined. However, the study of Hoy and Stankey (1993) examined whether the structural (format) characteristics of disclosures in prime time televised advertising meet “FTC’s clear and conspicuous standard”. The study found that none of the televised advertising disclosures complied with the standards. This finding indicated that the FTC could not rely upon respondents (i.e. advertisers) to provide effective disclosures.

In Thailand, the Thai Food and Drug Administration (FDA) also requires all pharmaceutical companies to provide warning disclosures for OTC drugs. Content and format of OTC drugs warnings have been mandated by the Thai FDA. Wording and use of key words are examples of content dimension. Type size, typeface, positioning, presentation rate, color of background, and mode of transmission are examples of format dimension. Warning messages must be stated exactly as

mandated in the regulation. Warning messages in advertisements on television must be clear and conspicuously presented in both audio and visual forms (Thai FDA, 2004). However, many studies in Thailand have found that some warning messages of OTC drug advertisements are not presented clearly and do not follow the regulations (Chowwanapoonpohn, Awiphan, & Lipowski, 2003; Pingsuttiwong, Ruengwises, & Awiphan, 1992; Prasert, 2001). For example, warnings are often presented in small print, placed in a non-attractive position, and briefly shown. Vocal warnings are frequently presented at high speed, hence consumers cannot understand and are unaware of the drug usage. From the problems mentioned above, it is concluded that OTC drug warning messages may not guarantee that the warning's communication is effective. Experimental investigation is needed to examine the influence that these characteristics, such as format and content of warnings have on all stages involved in consumer information processing. Effective communication may be operationalized in a variety of ways such as recall of the message, awareness of the message, comprehension of the message, attitude toward the message, or the message's influence on behavior (Jacoby, Nelson, & Hoyer, 1982). In addition, regarding the Thai FDA regulation, the "clear and conspicuous standard" for format of warning presentation on television is mandated only for the transmission mode situation. Other conditions for format dimension such as type size, typeface, positioning, and color of background are not considered. Therefore, other conditions to meet "clear and conspicuous standard" should be verified and defined.

From the actual situations of drug advertising in Thailand, this study will focus more specifically on factors that may influence the effectiveness of warning disclosures in televised OTC drug advertisements. In addition, the conspicuous

standard for warning disclosures presentation will be defined in this study. The results will be beneficial for designing more effective advertisements, especially warnings, which will provide clearer and more accurate information for consumers.

General Objective

To examine factors which influence the effectiveness of warning disclosures in televised OTC drug advertisements.

Specific Objectives

1. To examine the effect of format of warning (transmission modes of warnings and warning conspicuousness) in OTC drug advertisements on warning recall, warning recognition, and risk perception.
2. To examine the effect of content of warning (warning messages specificity and number of warning statements) and format of warning (warning conspicuousness) in OTC drug advertisements on warning recall, warning recognition, and risk perception.

Definitions

Over-the-counter (OTC) drug

OTC drug refers to a drug sold for the prevention, treatment, or symptomatic relief of disease, injures, or other conditions, acute or chronic, which can identify and treat alone or with professional advice (Center for Drug Evaluation and Research, 2004). Two categories which are pain relief and cold medication, mostly presented on

every media directly advertised to the Thai consumers, were selected to use in this study.

Transmission modes

Transmission mode is a particular way in which warning messages are broadcasted on the television. In this study, the warning modes are classified into three forms *i.e.* audio only, visual only, and audio visual. In the audio only mode, the warnings are limited with announcing to the receivers, whereas the visual only mode contains only visualized warnings. In the last, audio and visual mode, the warning messages are shown with both of the sound and visualization, simultaneously.

Warning conspicuousness

Warning conspicuousness refers to an easiness to notice the warnings in televised drug advertisements. Two different levels of information obtaining, high and low warning conspicuousness were created in this study.

Warning conspicuousness was varied by type size, message contrast background, position on the screen, and speaking rate. In high conspicuous warnings, bold, black, large prints on a white background were used. Warnings were placed in the middle of the screen. In this condition, the announcer used the same speaking rate as other words appearing in the same mock advertisement. Contrastly, in low conspicuous warnings, a plain, white, small print on the advertisement background were used. Warnings were placed at the bottom of the screen. The announcer used the speaking rate faster than other words in the same mock advertisement.

Involvement

Involvement in this study refers to involvement of self-medication. It is defined as the consumer's perception of the importance of a self-medication which composed of several aspects such as, the importance of OTC drugs for their life when compare with other category products such as food and clothing, or whether the consumers concern and seek for more information from several sources when they have to use OTC drugs.

Warning recall

Warning recall is the process of remembering, especially the process of recovering warning information by a mental effort. Warning recall was used to measure warning memory in this study. It was measured by two techniques, an unaided and aided recall. The unaided recall technique asked participants to give details of warning messages in all products they remember after viewing television program. An aided recall technique asked participants to give details of warning messages by given the name of a test product.

Warning recognition

Warning recognition is another variable used to measure warning memory in this study. A recognition measure involved asking the participants to identify the correct warning messages from a set of possible answers. To evaluate the recognition of the subject after viewing the test advertisement, the lists of warning messages were shown to the participant, following with asking him/her to check the alternatives (s)he could remember.

Risk perception

Risk perception refers to a consumer's perception of the uncertainty and adverse consequences associated with using OTC drugs (Dowling & Staelin, 1994). In this study, risk perception of OTC drug composed of two dimensions, performance risk and physical risk. Performance risk is the possibility that using OTC drug will not achieve the intended outcome. For example, a drug might not achieve the desired clinical outcome. Physical risk is the potential for an injury resulting from consumption. For OTC drugs, this refers to the perception of adverse effects or drug overdose.