THE READABILITY OF MEDICINE LABEL AMONGST SENIOR CITIZEN

INSTITUT PENGURUSAN PENYELIDIKAN
UNIVERSITI TEKNOLOGI MARA
40450 SHAH ALAM, SELANGOR
MALAYSIA

BY:

IRWAN BIN ZAKARIA

MAY 2012

ABSTRACT

Preliminary study have proved that elderly person have a problem in reading their prescription medication labels. Questionnaire surveys were conducted in five local clinics involving 200 respondents. Targeted respondents were individual with low vision; whose are unable to read printed materials at a normal viewing distance, without reading glasses or contact lenses. Respondent's average age were between 45 – 65 years old. Results from questionnaire conducted revealed that most respondents have difficulties in reading existing medication labels. Thus, new prescription medication label was proposed. The new proposed prescription medicine label employs larger print fonts (14 point), incorporates cautionary and expiry date. Generic medicine name was also included and the uses of the medicine were printed underneath. Most consumers prefer the new prescription medicine label with larger font size when compared to the current prescription medicine label. The evaluation of the new label has shown that prescription medicine label with larger font size can be introduced into local clinics with a minimum disruption to workflow.

1.0Introduction

Taking medicine for elderly people is a complex process which involved cognitive and physical demands. It was believed that as we getting older, the reading ability will become lower and the number of medication will be increased. Studies have shown that medicine use increases with age [1-4]. The idea of this project evolved when elderly relatives often asked for help to read their prescription medicines label. During observations at banking premises and other government agencies, we often seen elderly person have to be assisted with printed document and to point out where they should sign their names. All these had raised a concern that perhaps they had difficulties to read printed materials with small font size.

Samples of prescription medicine labels were collected from various public clinics, private clinics and public hospitals to have an insight understanding on its design and specification. The instructions are often, but not always, written on the label of the container or on the polyethylene medicine envelope. Many patients depend on medicine labels and information leaflets for their medication information. However, these materials are often difficult for patients to understand especially for elderly person. It is hard for many individuals, especially the elderly, to read medicine labels due to small font size printed on the labels. At clinics or hospitals, nurses usually give oral information to the patient on how to use the medicines and how it works. However, since it is known that patients often forget a large proportion of what has been discussed during the visit, he or she will then have to rely on the instructions given on the label. Poor communication between health professionals and elderly patients resulted in inability of patients to understand and remember their medication instructions [5]. Improper medication use is also associated with increased rates of hospitalization [6-8], higher health care costs [9-11] and death [12-14].

A preliminary study was conducted to confirm whether there were problems amongst elderly in reading prescription medicines label. The test was conducted at Cheras, Kuala Lumpur in April 2011. Thirty respondents participated in the readability test. The respondents' age ranges between forty five to sixty five years old. This community-based survey also provided an opportunity to assess the number of medicine use and to correlate

this use with other health traits. Font sizes used in the test sheets ranged from 5 to 16 point size. Those who said that they could read 5 to 8 point size font were considered able to read all types of medicine labels including cautionary and advisory warning labels. Those who could read 9 to 12 point size font were considered likely not to have problems with medicine labels. Those who could not read below 13 point size font were considered likely to have problems with all medicine labels. Result from the readability test is shown in Table 1.

Font Size	**No. of respondents who can read**	**% of result**
5-8 point	3	10%
9-12 point	10	33.4%
13-16 point	17	56.6%

Table 1: Readability test result

Result from the readability tests led to a conclusion that, elderly persons were having difficulties to read their current prescription medicines label. It was evidence that, there would be a benefit to propose a new medicine label design with larger font size. The use of larger font size will enhance elderly person's understanding on how they should take their medications, particularly when they are alone at home. Results from this study will benefit elderly person during the time of medication intake, to easily read their prescription medicine labels without helps from other people and without their glasses. Prescription medicine label with larger font size is also believed to have an impact on the patient safety.

2.0 Literature Review

The prescription medicine label is the fundamental and core communication medium which identify the medication that has been prescribed by the doctor. It also records the intended manner in which the prescriber has instructed the patient to take or use their medication. The dispensing and label provided by the pharmacist transmits this information to the patient. If patients are unable to read and understand the medicine labels, the value of the label becomes insignificant.

The patient ability to read prescription medicine labels is not solely determined by the print size on the label, their ability to interpret the information is also important [15]. Andrus et al [15] noted in a review of health literacy in the US that, up to 48% of English speaking patients do not have adequate functional health literacy. They also stated that patients are often unable to correctly interpret dosing instructions. Pharmacists and healthcare professionals cannot assume that written instructions or verbal message are consistently clear and understandable, or that they will be implemented as intended. Andrus et al [15] suggested the use of simple, large font with a mixture of upper and lowercase letters. However, they do not specify font sizes. The study pointed out that, since reading and comprehension of information, were part of the daily life of most health professionals, there is a tendency to assume patients can read and understand information adequately.

A literature search revealed more articles that tend to report research associated with consumer medicine information, comprehension of information, compliance and labelling of non-prescription medication, and research into the use of auxiliary labels. Nicolson et al [16] detail the protocol on written information of medicines for consumers. Moisan et al [17] measured the effect of difficulties in reading and understanding prescription labelling on non-compliance with drug treatment amongst seniors. However, the study was unable to demonstrate an association between the two.

Koo et al [18] reported factors influencing consumer use of medicine information. The study noted that readability and presentation were amongst the factors which may potentially influence the use of such information. This includes font size of 10 (1.5mm) and 12 point