Exploring Health Marketing Strategies by the Ministry of Health Malaysia in Preventing Cervical Cancer: A Preliminary Review

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Abstract. In Malaysia, 12.2 of every 100,000 population of women are diagnosed with cervical cancer. According to WHO report in 2007, more than 700 Malaysian women die of cervical cancer each year. This statistic is expected to increase and is forecasted to be at ca 3,500 by the year 2025 (World Health Organization 2007). Therefore, it is crucial for women to understand the danger that cervical cancer poses and to be aware of the risks involved in order to alleviate or prevent this trend. It is also critical that Ministry of Health in Malaysia understand how women assimilate their knowledge about cervical cancer and use this information to develop/refine their health marketing strategies in this area. The objective of this study is to explore the health marketing strategies utilized by the Ministry of Health Malaysia in the prevention of cervical cancer. This study is using a multiple method approach will be implemented in 3 phases; an initial qualitative phase, followed by a quantitative phase and a second qualitative phase to meet the overall aim of this study. A total of 768 participants are required for this study and will include women who suffer from cervical cancer, women in at risk groups and staff of the Ministry of Health who have responsibility for implementing health marketing strategies. Ethical approval will be sought from the ethics committee at AIT and additional approval will be sought from the human ethics committee for each of the clinical centers to be used in this study prior to commencing data collection. In depth interviews (phase I) will be used to collect data from women who attend each center for cervical screening. Each interview will be guided by questions based upon the theoretical framework outlined in Appendix I. In Phase two of this study questionnaires will be developed based on the information gleamed from data obtained in phase one through factorial design. Further data will be collected using focus groups to include all stakeholders in phase three of this study. Analysis of data from in-depth interviews and focus groups will begin with verification of data through translation and back translation. When verified all these data will be handled sensitively and a recognised frame work will be used for analysis. All quantitative data will be analysed using the Statistical Package for the Social Sciences (SPSS version 18.0). It is envisaged that the findings arising from this landmark research study will impact positively on women's health in Malaysia, and will have a clear nexus to education and knowledge exchange.

INTRODUCTION

Marketing is known as the process of applying the four basic principles; namely the 4Ps (Product, Place, Price and Promotion). This concept is rather seen as traditional marketing processes due to its nature that primarily based on basic principles originated from the early existence of the marketing knowledge. Nevertheless, this traditional marketing process remains applicable and largely relevant

to current business setting as well as future. Apart from that, this unique marketing concept has also contributed and expanding into various usages, which cater for numerous situation and application. "Marketing is theory based, it is predicted on theories of consumer behaviour, which in turn draw upon the social and behavioural sciences" (Novelli, 1990). People have started moving forwards and begin initiating the transformation of the traditional marketing that resonate to the current trend and globalisation, advancing towards borderless communities.

The Concept of Social Marketing. In many parts of the world, people are inclining to view Corporate Social Responsibility (CSR) as part of contribution in their business endeavour. This sentiment primarily embraces social obligations, responsibilities, or even annual rituals that echo the continuation and importance for any organisations, business owners or companies to progressively approach the profit with market rapid expansion (Lovelock, 1983). Consequently, CSR is recognised as a way for the traditional marketing rapidly evolving from the traditional form to another affair.

Another form of innovation that traditional marketing has successfully advanced is social marketing in which the comprehensive definition falls under marketing in relation to the definition stated herewith (Bryant et al., 2007). Social Marketing is defined as the design, implementation and control programmes calculated to influence the acceptability of social ideas and involving considerations of product, planning, pricing, communications and market research (Kotler and Zaltman, 1971). They referred to social marketing by using the marketing principles and tools by delegating to the social benefit as a whole rather than profit or other organization goals (Donovan, 2011a). Further to that, social marketing by definition significantly plays the basic role of traditional marketing and revolutionised it so that it will be applicable for the public by means of charity approach.

The social marketing concept extends in two directions: to marketing organizations and to social problem-oriented agencies. It is also argued that non-for-profit health agencies at the federal, state, and local levels would be more effective if they utilized marketing concepts more carefully and explicitly (Zaltman and Vertinsky, 1971). "If the basic objective of corporate marketers is to satisfy shareholders, the bottom line for social marketers is to meet society's desire to improve quality of life" (Serrat, 2010). Evidently, social marketing is typically practiced by non-for-profit agencies. The marketing elements embedded includes methods like campaign, promotion, roadshows, and others which utilised donation money from the public or corporate to generate income in sustaining their activities. Social marketing is also practised by government bodies to create awareness towards certain impending issues, phenomenon, health issues in ensuring the public is ascertain on latest events and to prepare them for any casualties or calamities (Donovan, 2011b). As a matter of fact, social marketing is rarely used to highlight matters related to contentment as it is usually produced as reminder or alert.

Women and Cervical Cancer in Malaysia. In Malaysia, social marketing focuses much in health awareness programme and campaign especially cancer. The public is usually informed about its threat and fatal consequences should they fail to live a healthy lifestyle (Morris et al., 1992). The reason cancer diseases are being highlighted through health awareness because it is popular among women in Malaysia. Cancer is a group of diseases characterised by uncontrolled growth and the spread of abnormal cells in the human body. It severity and late treatment can cause death to the individual (American Cancer Society, 2010). Cancer is caused by both external factors (tobacco, infectious organisms, chemicals, and radiation) and internal factors (inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). These causal factors may act together or in sequence to initiate or promote carcinogenesis. Ten or more years often pass between

exposure to external factors and detectable cancer. Cancer is treated with surgery, radiation, chemotherapy, hormone therapy, biological therapy, and targeted therapy. Nowadays, women suffer from many kinds of cancer. On a global scale, it is reported that one woman dies of cervical cancer every two minutes and the disease claimed 270,000 lives each year. According to World Health Organisation (WHO) mortality rates of cervical cancer is higher than deaths during childbirth each year. General aspects of cancer, cervical cancer are the most significant second cancer in women after breast cancer. In Malaysia, 12.2 of every 100,000 population of women diagnosed with cervical cancer. According to WHO report in 2007, more than 700 Malaysian women died of cervical cancer each year (World Health Organization, 2007).

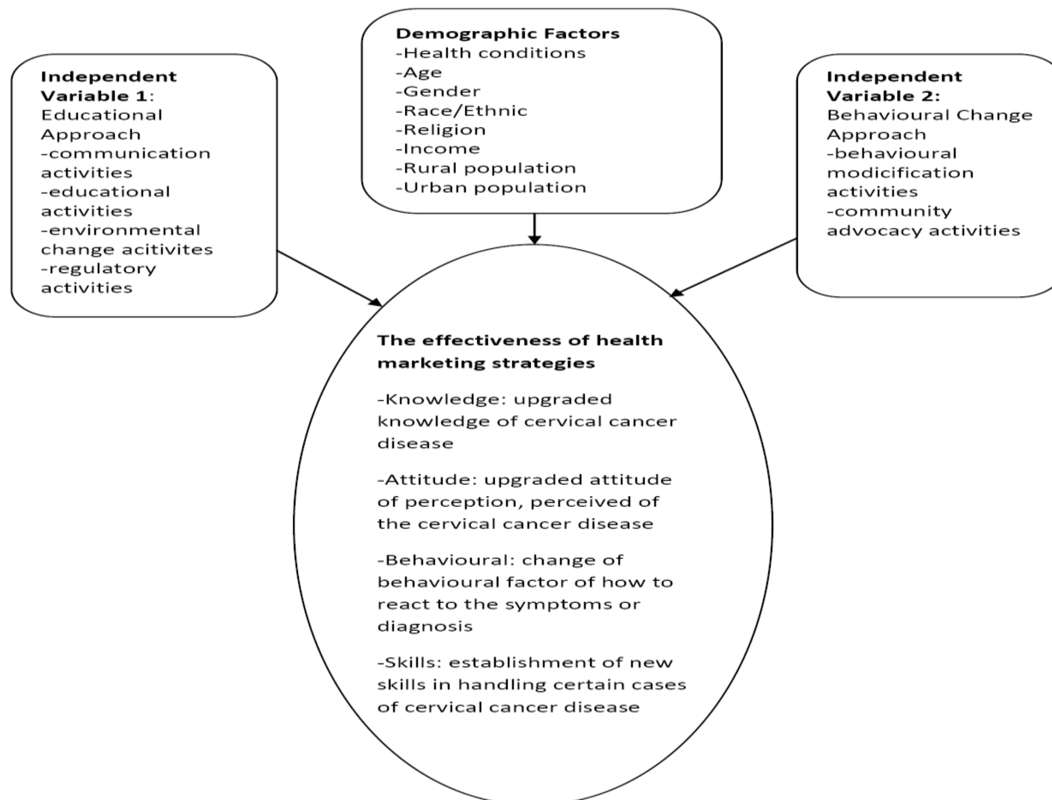
The cervix is the lower part of the uterus (womb) (American Cancer Society, 2010). It is sometimes called the uterine cervix. The body of the uterus (the upper part) is where a baby grows. The cervix connects the body of the uterus to the vagina (birth canal) (National Cancer Institute, 2011). The part of the cervix closest to the body of the uterus is called the endocervix. The part next to the vagina is the exocervix (or ectocervix). The 2 main types of cells covering the cervix are squamous cells (on the exocervix) and glandular cells (on the endocervix). The place where these 2 cell types meet is called the transformation zone. Most cervical cancers start in the transformation zone.' (American Cancer Society, 2010)

On all front especially women, there has been a full scale publicity and campaign about the danger of cervical cancer. The volume of patients is expected to increase every year and is forecast to be at 3,502 by the year 2025 (World Health Organization). Despite all that, individual who is at risk to contract the disease still fail to anticipate how cervical cancer might be infected to each and everyone of them especially teenage over 15 years old. Current reminder and continuous warning with regards to cancer prevention although are widely available, has now becoming less effective as well as fail in understanding the needs to better disseminate such information to the risk group at different stages. This is why people at large are still living in absolution and neglect the practise of cancer prevention (Lefebvre et al., 1995). Undoubtedly, it is crucial for every women to understand the danger that cervical cancer poses and aware who are at risk to be exposed with cervical cancer. In order to acknowledge the potential individual at risk of contracting the cervical cancer, this study is proposed to seek the level of knowledge of the individual as well as the existing patients.

Theoretical Framework. This study seeks to investigate whether the Ministry of Health Malaysia has successfully implemented effective marketing methods to ensure that the risk groups know and make known about the danger of cervical cancer. Besides that, this study also seek to identify the relationship between the awareness of current health marketing strategies among women and its impact on cervical cancer prevention (Turner et al., 2004). The findings of the study are expected to provide recommendation the effective marketing strategies to be considered by the Ministry of Health Malaysia for future exercises and campaigns.

Table 1 illustrates the theoretical framework of relevant factors in determining health marketing strategies in Malaysia (World Health Organization, 2011). There are two independent variables which is Independent Variable 1 indicates the educational approach that should deliver to the impact on Independent Variable 2. Demographic Factors here are formed of the health conditions, age, gender, race/ethnic, religion, income, rural population and urban population. It is to make known the background of these factors in order to relate the factors available with the cervical cancer diseases itself. All of the combination will contribute to the effectiveness of health marketing strategies in forms of knowledge, attitude, behaviour and skills.

Table 1. Factors Determining Health Marketing Strategies in Malaysia



OBJECTIVES AND METHODS

The general objective of this study is to explore the health marketing strategies utilised by the Ministry of Health Malaysia in the prevention of cervical cancer. The specific objectives are outlined as below:

1. To determine the level of knowledge of among women about cervical cancer.
2. To determine the current marketing strategies used by the Ministry of Health Malaysia to educate women about the disease.
3. To examine the relationship between awareness of current health marketing strategies among women and their impact on cervical cancer prevention.
4. To identify possible future health marketing strategies that could be used to enhance women's knowledge of the disease.

Research Design. This study will be using a multiple method approach; an initial qualitative phase followed by a quantitative phase and a second qualitative phase to meet the overall aim of this study (Fitzgerald et al., 2010). Initially semi-structured interviews will be used to meet objective one and data from this phase will provide the basis for a questionnaire. This questionnaire will be developed to meet objectives 2 and 3 based on the theoretical construct as outlined in Table 1. Finally all stake holders will be invited to partake in focus groups to meet objective 4 of this study.

Possible limitations to this approach have also been considered, such as delayed timeframe to completion due to the vast depth of data to be collected (Creswell 2003). However it is envisaged that these possible contaminations or unexpected findings may be explained by using follow up qualitative methods (Tashakkori and Creswell 2007); it is therefore deemed appropriate to use this mixed methods in order to meet this study's objectives.

This design was chosen for a number of reasons:

* Self-administered questionnaires as a data collection tool or part there off; are recognised for their limitations, lack of scientific rigor and reduced generalisation of results (Faugier and Sargeant 1997). However the integration of qualitative results with quantitative are viewed as enhancing the findings (Tashakkori and Creswell 2007).

* The theoretical basis for women's health is evident within the literature and thus a questionnaire based around this framework, will allow the researcher to examine these areas whilst also exploring participant's views of health, using follow on focus groups.

* This design may also allow the researcher to gain a more in-depth view of ambiguous or unclear results obtained within the quantitative element (Creswell 2003, O'Cathain 2009).

* Exclusivity of method/ specific paradigm will only partially address the objectives for this study and therefore based on current theoretical knowledge of women's health, the dearth in knowledge around Malaysian women's health in the Malaysia, this method was deemed appropriate in meeting the research objectives (Simmons 2007).

Research Sample. Participants will be drawn from women who suffer from cervical cancer, women in at risk groups and from staff in departments of the Ministry of Health. In order to work out the exact number required to produce statistically significant data for the quantitative element of this study; figures of potential cervical cancer patients (N=8.7 millions) and those who are cervical cancer patients (n=2126) will be calculated. Working on a margin of error of 5% for this figure; a total of 768 participants will be required (Krejcie and Morgan, 1970). This margin of error is advocated in the literature i.e. 5% for survey based/non experimental research (Hedges and Bliss-Holtz, 2006). In order to maintain this margin of error, almost double the number of required participants will be included in this study i.e768 participants. The basis for this adjustment relates to current trends in social research indicating that surveys or self-administered questionnaires usually have a 35-50% response rate.

*(N)=total potential cervical cancer patients, (n)=total cervical cancer patients

A Convenience sample will be drawn from clusters of women who present at assessment clinics for cervical cancer from across the Malaysia. The decision to use these clusters was based on the following evidence:

1. Information regarding distribution of total population from the national statistics as seen in Table 1 (Appendix II)

2. The current epidemiological data from the Department of Health Malaysia

In order to ascertain to most effective way of accessing this population, advice was sought from a number of sources; it was therefore decided that the best way to access this population in urban areas. By looking at the statistic of Malaysian Cervical Cancer patients, most of them are from Chinese descent (World Health Organization). Based on that, the researcher has identified a site for each cluster based on geographical spread and population data i.e. cluster sites are: i. Northern Region: Penang, Central Region: Selangor, Southern Region: Johore and East-Cost Region: Pahang

Selection for involvement in focus groups and semi structured interviews will be through purposeful sampling and the inclusion exclusion criteria for both sets of participants are currently under review.

Measurement:

The quantitative element of this study will meet objectives 2 and 3 and will involve the self-administration of a questionnaire developed on the finding of semi-structured interviews in phase one and in line with theoretical framework (Table 1). Reliability of the English version of this questionnaire will be ascertained using measures of stability and internal consistency through a pilot study. Prior to the pilot study commencing original English version of both documents and the back translated version will be then compared for similarity or difference by the researcher and his supervisors. These steps are in line with international guidelines pertaining to translation and back translation (Guillemin et al., 1993;Beaton et al., 2000). In addition validity will be achieved through translation and back translation process is complete the finalised English version of the questionnaire will to subjected to factorial analysis to ensure construct validity.

Ethical Consideration:

Ethical approval will be sought from the ethics committee at AIT and additional approval will be sought from the human ethics committee for each of the clinical centres used in this study prior to commencing data collection. There is an appreciation and understanding of the robustness of this process and of the need for this in the protection of human subjects (Altranais, 2000;Altranais, 2007).

The researcher will take cognisance of the bioethics guidelines of both Ireland (Hedgecoe, 2004) and Malaysia and will ensure that all aspects of this study adhere to these guidelines. In addition two of the co-supervisors of this project are nurses and are therefore subject to professional guidelines on research supervision (Altranais, 2007). These standards require the researcher to be beneficent in her actions throughout the study, is non-maleficent to all involved in the study and has a duty of care all throughout.

In addition the researcher is obliged to ensure that all participants of this study are fully informed as to what the study entails, are happy to participate without feeling pressured and free to withdraw at any time (Altranais, 2000;Hedgecoe, 2004;Altranais, 2007). Finally the researcher has an obligation to ensure all participants sign consent and are fully aware /informed as what they are signing. The researcher will endeavour to adhere to these principles throughout this study

Data Collection. Following ethical approval for this study, the researcher will write to each of the clinical centre coordinators' seeking permission to attend each centre and liaise with possible participants to partake in this study. Data collection will occur in 3 phases:

Phase one . Semi-structured interviews were used to collect data from women who attend centre for cervical screening. Each interview will be audiotaped and guided by the recommendations of the regional ethics committee. The structure and nature of the interview will be guided by questions based upon the theoretical framework of educational and behavioural change approach to health. This method of interviewing will be used to gather data pertaining to their understanding of cervical cancer.

Phase two. All questionnaires will distributed to the previously identified centres and all participants will be assured that participation is entirely voluntary and of their right to confidentially. Each participant will be provided with an information sheet in advance; which will detail the aims and objectives of the study, the rationale for the study and the envisaged benefits of conducting the study. Written consent will be ascertained from each participant and enclosed with each questionnaire.

Phase three. All participants in phase two will be offered an opportunity to partake in focus groups and those interested will be identified when they are completing their questionnaires. A second information sheet detailing the refined objectives of the focus groups, duration of each group with venue and proposed time, will also be provided to group participants in advance. It is envisaged that exact information pertaining to these focus groups will be developed following quantitative analysis being complete and additional focus groups will be conducted with staff of the department of health

Data Analysis. The data obtained from the questionnaires will be analysed by computer using the Statistical Package for the Social Sciences (SPSS version 18.0). Both descriptive and inferential statistics will be used in the analysis of subsets; these subsets will be developed using post data collection stratification (Bunn and Black, 1999). This requirement was exemplified in the literature as variables such as income; employment/occupation, education level, housing status, social participation, and age are all deemed to effect healthy behaviour and possible health status (Department of Health and Care, 2008; Farrell et al., 2008)(Farrell et al 2008, and Department of Health and Children 2008).

Descriptive statistics . Descriptive statistics will be used to analyse the demographic data collected from the participants i.e. age, and education level. Descriptive analysis of data collected from each cluster will also be provided which will enhance the researcher's ability to provide a profile the participants involved in the study (Polit and Beck, 2010). Nominal and ordinal data i.e. education level will be collated using frequency tables. These tables will be presented using numerical frequency and percentage values, which will allow the researcher to the stratify the variables (Coxon, 1999).

Frequency distribution will used to analyse ratio and interval data such as age, Educational Approach and the Behavioural Approach scores or subscales of both. This method of analysis will allow for the measurement of mode and variability to the data sets collected. It will also indicate ranked order of numerical data collected, outlying values or values which may have been entered incorrectly (Coxon, 1999;Polit and Chaboyer, 2012). This information can be represented in several diagrammatic ways but frequency distribution in this study is be represented using a histogram as this allows for bell curve imposition, which will used by the researcher in analysing the data This method of diagrammatic representation will require central tendency to be measured using mean, mode and median (Polit and Beck, 2010).

Inferential statistics. Descriptive analysis will provide a background for a more in-depth analysis of the data using inferential statistics. This will allow the researcher to establish a pattern between the variables and measure the strength of association between the variables (De Vaus, 2002) e.g. Educational Approach and the Behavioural Approach. It is clear from the literature that studies in similar areas have used parametric statistics (t-test and ANOVA) in analysing data and it is therefore deemed appropriate to use similar in this study. By using one way analysis of variance the researcher will have the capacity to explore the effect of subsets of other independent variables (Socio-demographic factors) the effectiveness of health marketing strategies

Qualitative Data Analysis. Analysis of data from semi structured interviews and focus groups will be carried out as follows. The possibility omissions and misinterpretation (Kahneman and Krueger, 2006) were considered and in particular the possible language barrier (Esposito, 2001;Lopez et al., 2008). In order to address this and in line with best practice all data will be collected in the researcher's first language and when in a usable English format data analysis will begin. Data will be collected as outlined previously and managed as outlined in attached (Appendix). The purpose of using these guidelines (Lopez et al., 2008) and will use template to ensure the rigour of this process. Two independent translators will be recruited to complete the forward and back translation process When verified data is produced all data will be handled sensitively and a recognised frame work for analysis of qualitative data will also be used.

CONCLUSION

This research will be carried out in stages through the collection of qualitative and quantitative data. The questionnaires will be disseminated to the identified respondents and feedback will be further analysed using statistical tools, namely SPSS. Findings will be used as a standard to suggest to the Ministry of Health Malaysia to be adapted through their campaigns and advertisements. This study will benefit not only to the cervical cancer potential patients and the ministry, but it can also be applied by other types of diseases for them to map out earlier prevention steps. Questionnaires and interview sessions that will be conducted can help to drive this research to find the most understandable method of conducting marketing activities by using psychological and empathy approaches. Potential patients of cervical cancer will be made to understand the real action of having to avoid the disease. It is crucial for them to accept whatever campaigns and advertisements that are made using the right manner and techniques as all are made to inform and tell something beneficial for potential patients.

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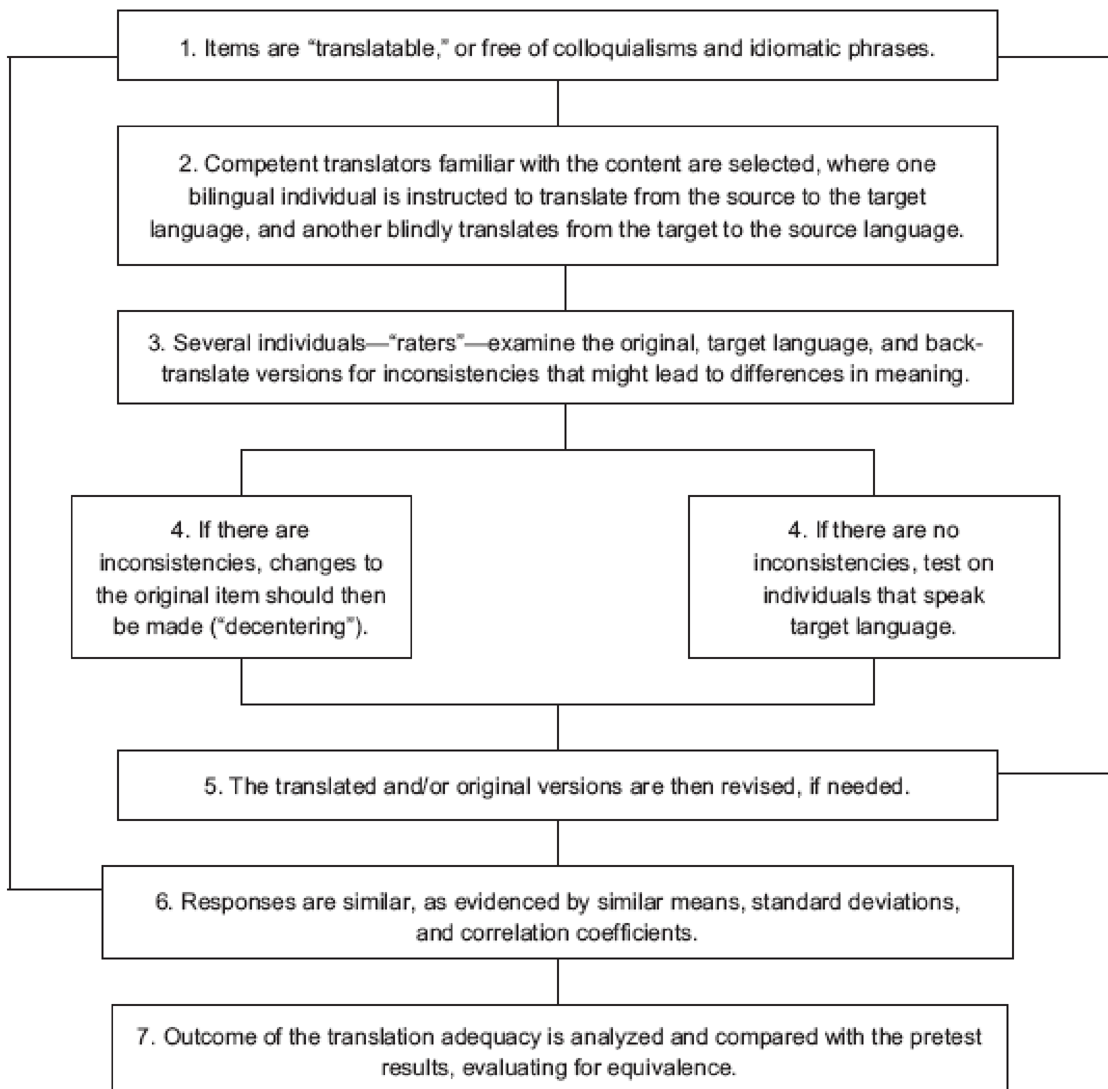
Appendix I

Brislins Seven Step Translation Model (1970, 1980) Adapted by Lopez 2008



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